

**A CULTURAL RESOURCES INVENTORY OF  
256 ACRES NEAR DRAGOON,  
COCHISE COUNTY, ARIZONA**

*Prepared by:*  
Anna M. King

*Reviewed and submitted by:*  
Mary M. Prasciunas, Ph.D.



**WestLand Resources, Inc.**  
Engineering and Environmental Consultants  
4001 East Paradise Falls Drive  
Tucson, Arizona 85712  
(520) 206-9585

**Cultural Resources Report 2014-52A**

**October 22, 2014**  
Project No. 1887.01

## TABLE OF CONTENTS

ABSTRACT.....	iii
INTRODUCTION AND PROJECT BACKGROUND.....	1
Archaeological Background.....	1
Historical Map Review .....	6
Environmental Setting .....	7
CULTURE HISTORY FOR SOUTHEASTERN ARIZONA .....	8
Native American Occupation of Southeastern Arizona .....	10
Paleoindian Period (Pre-8500 B.C.).....	10
Archaic Period (8500 B.C.–A.D. 1).....	11
Formative Period (A.D. 1–1450).....	13
Early Formative Period (A.D. 1–700).....	14
Middle Formative Period (A.D. 700–1150).....	15
Late Formative Period (A.D. 1150–1450) .....	17
Protohistoric Period (A.D. 1450–1691).....	18
Euroamerican Occupation of Southeastern Arizona.....	20
Historic Period (A.D. 1691–1950).....	20
SURVEY EXPECTATIONS.....	24
SURVEY METHODS .....	25
SURVEY FINDINGS.....	26
Isolated Finds.....	26
Research Synthesis.....	26
NATIONAL REGISTER OF HISTORIC PLACES.....	30
Historic Context.....	30
Prehistoric Occupation of the Dragoon Area.....	32
National Register of Historic Places Eligibility Evaluations .....	32
Historic-Modern Occupation of the Dragoon Area .....	32
National Register of Historic Places Eligibility Evaluations .....	32
Assessment of Effect and Recommended Treatment .....	32
MANAGEMENT SUMMARY .....	33
REFERENCES .....	34

## FIGURES

Figure 1.	Vicinity map .....	2
Figure 2.	Project location showing surface management .....	3
Figure 3.	Previously recorded archaeological sites and projects within 1.6 km (1 mile) of the project area .....	5
Figure 4.	Isolated occurrences in the project area.....	27

## CHARTS

Chart 1.	Synoptic chart of selected cultural chronologies from central and southern Arizona.....	9
----------	---	---

## PHOTOGRAPHS

Photo 1.	Overview of the project area, looking southwest .....	1
Photo 2.	IO 6, a breached erosion-control feature across a downcutting drainage, looking southeast.....	28
Photo 3.	IO 8, a prospect pit excavated into the rocky alluvium, facing west.....	28

## TABLES

Table 1.	Previously recorded archaeological projects within 1.6 km (1 mile) of the project area .....	4
Table 2.	Previously identified archaeological sites within 1.6 km (1 mile) of the project area .....	4
Table 3.	Isolated occurrences identified within the project area .....	28

## APPENDICES

Appendix A.	Cultural Resources Identified	
-------------	-------------------------------	--

## **ABSTRACT**

**REPORT TITLE:** A Cultural Resources Inventory of 256 Acres near Dragoon, Cochise County, Arizona

**REPORT DATE:** October 22, 2014

**PROJECT DESCRIPTION:** Darling Geomatics contracted with WestLand Resources, Inc. (WestLand), to conduct a cultural resources inventory of approximately 256 acres of private property prior to planned mineral exploration activities. The project area is located in Township 15 South, Range 23 East, a portion of Section 31 (Dragoon 7.5' USGS quadrangle) north of Dragoon, Cochise County, Arizona. WestLand's cultural resources inventory resulted in the identification of 22 isolated occurrences of cultural materials.

**AGENCY:** None

**PROJECT NUMBER:** 1887.01 (WestLand)

**LAND STATUS AND JURISDICTION:** Private

**LOCATION:** Township 15 South, Range 23 East, a portion of Section 31, Gila and Salt River Baseline and Meridian, north of Dragoon, Cochise County, Arizona (Dragoon 7.5' USGS quadrangle)

**PERMIT NUMBER:** None (private land)

**ACRES SURVEYED:** 256 acres

**FIELD SURVEY DATES:** September 16–18, 2014

**NUMBER OF CULTURAL RESOURCES:** 22 isolated occurrences

**REGISTER-ELIGIBLE PROPERTIES:** None

**INELIGIBLE RESOURCES:** 22 isolated occurrences

**ELIGIBILITY NOT DETERMINED:** 0

**ASSESSMENT OF EFFECT AND TREATMENT RECOMMENDATIONS:** WestLand's cultural resources inventory resulted in the identification of 22 isolated occurrences of cultural materials. WestLand recommends that the 22 isolated occurrences are ineligible for inclusion in the National Register of Historic Places because they lack significance. No further archaeological work is recommended for these resources. WestLand provides the general recommendation that all ground-disturbing activities have the potential to unearh human remains. On private lands in the state of Arizona, such discoveries must be treated in accordance with Arizona Revised Statute §41-865.

## INTRODUCTION AND PROJECT BACKGROUND

Darling Geomatics contracted with WestLand Resources, Inc. (WestLand), to conduct a cultural resources inventory of approximately 256 acres of private property (the project area) prior to planned mineral exploration activities. The project area is located within Township 15 South, Range 23 East, a portion of Section 31 (Dragoon 7.5' USGS quadrangle) north of Dragoon, Cochise County, Arizona (*Figures 1 and 2; Photo 1*).



Photo 1. Overview of the project area, looking southwest

WestLand performed the archaeological survey and prepared this report in accordance with Arizona State Museum (ASM) standards for an archaeological inventory as specified in the Arizona Board of Regents Rules, Chapter 8, Section 200 *et seq.* The cultural resources inventory also meets the reporting standards described by the Arizona State Historic Preservation Office's (SHPO's) 2012 revised standards for documents submitted for SHPO review in compliance with historic preservation laws.

The cultural resources inventory fieldwork was conducted on September 16 through 18, 2014, by WestLand archaeologists Anna King, Gaylen Tinsley, Adam Marshall, and Brian MacHardy. The project was conducted under the direction of Fred Huntington, who served as project manager. WestLand's cultural resources inventory resulted in the identification of 22 isolated occurrences of cultural materials.

## ARCHAEOLOGICAL BACKGROUND

Prior to fieldwork, WestLand performed an archaeological records check for the project area. Site record files were searched in the ASM online database (AZSITE) for information on previously recorded sites

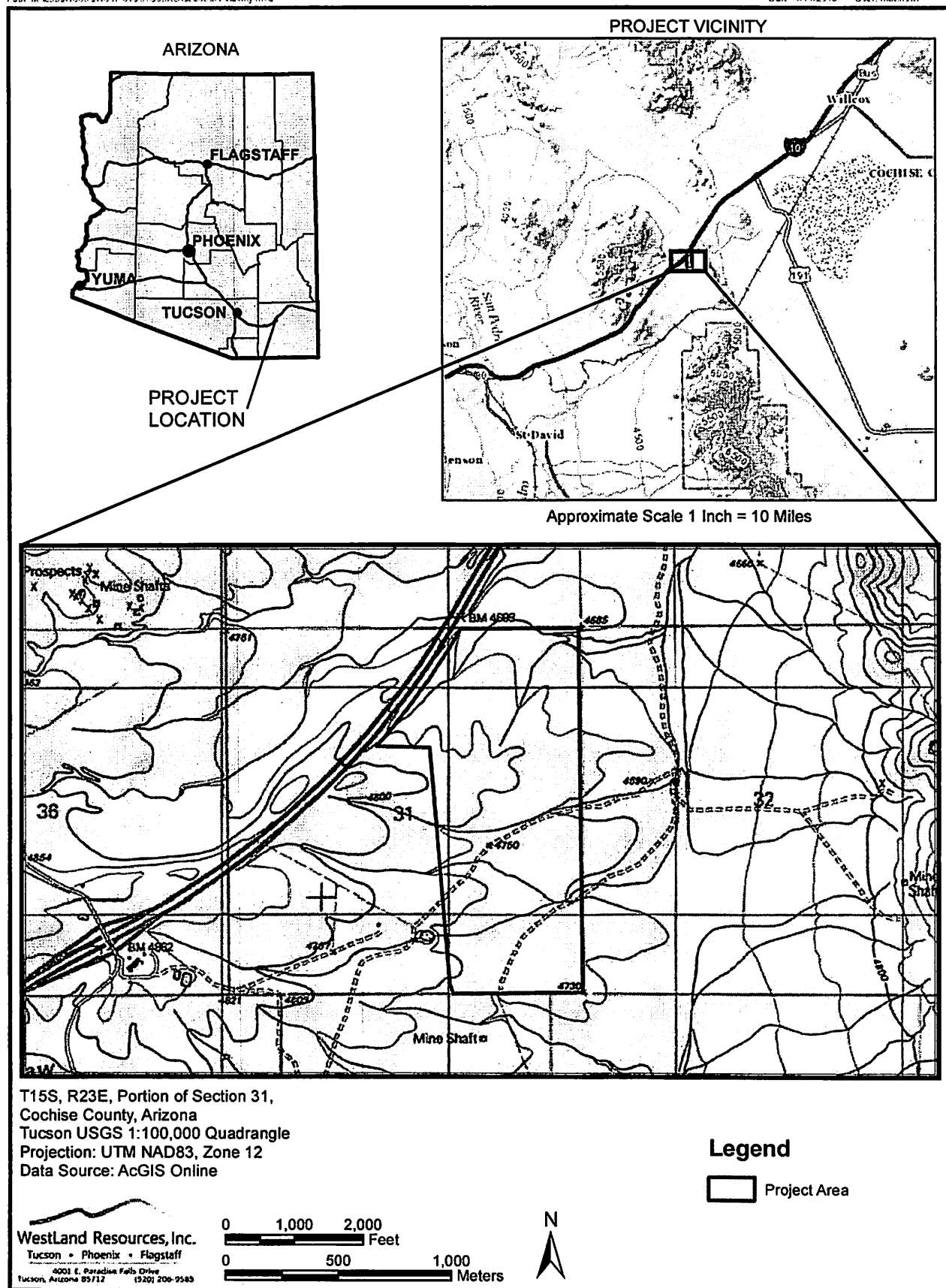


Figure 1. Vicinity map



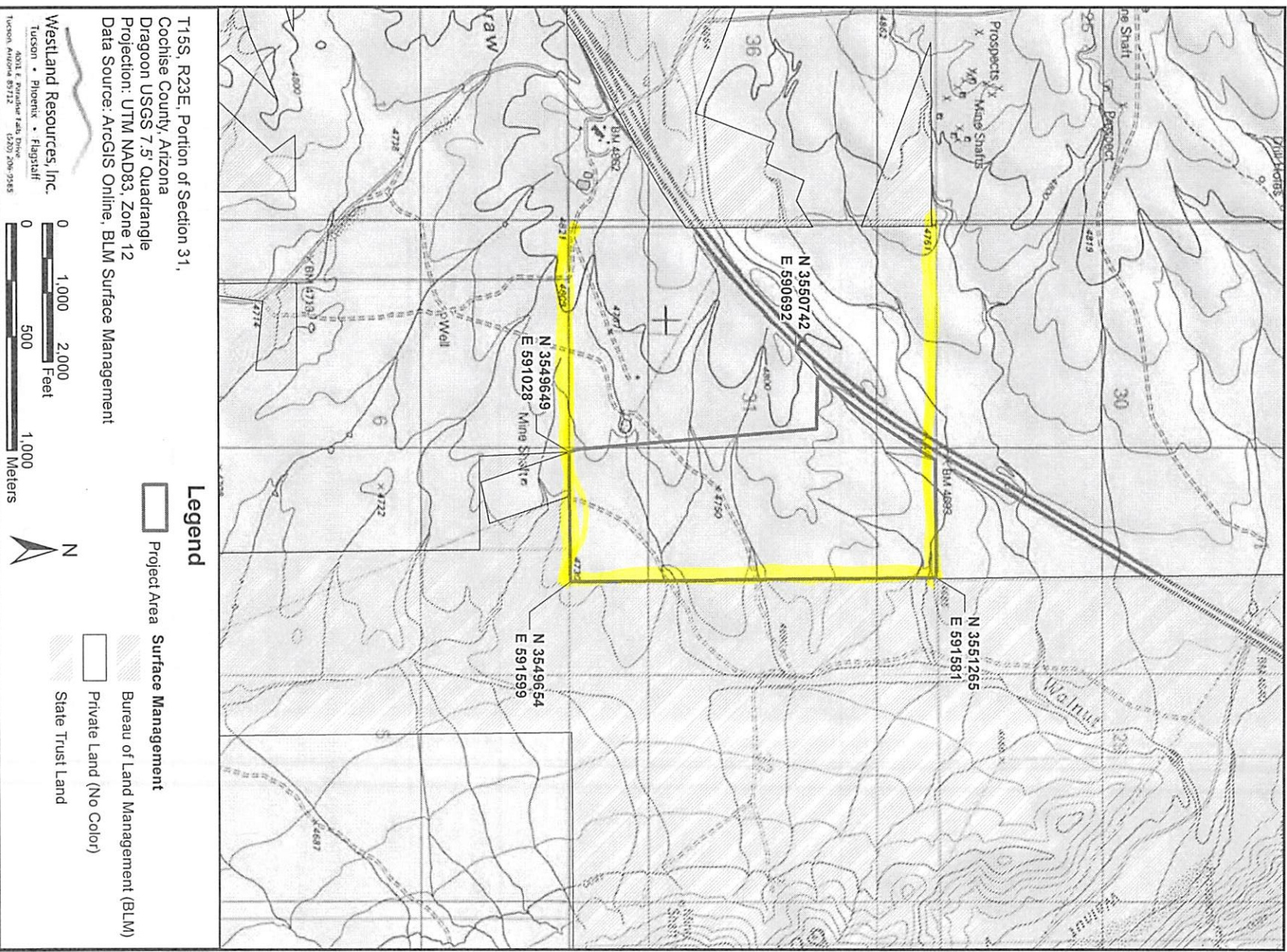


Figure 2. Project location showing surface management

and projects within the project area and a surrounding 1.6-km (1-mile) buffer. Additionally, due to the presence of an adjacent Bureau of Land Management- (BLM-) administered parcel, records at the BLM Safford Field Office were researched to identify previous sites and projects in the vicinity of the project area. According to these records, 11 cultural resource inventories have been conducted within 1.6 km (1 mile) of the project area, two of which intersect it (*Table 1; Figure 3*). These inventory projects span the past several decades and were conducted for various purposes, but particularly mineral leases, road-related construction, and utility improvements. A cultural resources inventory of the parcel southwest of and directly adjacent to the project area was conducted by Professional Archaeological Services and Technologies (Stephen 2010). Also notable is the proximity of the project area to the Amerind Foundation, which served as the home base for the work of William Shirley Fulton during his studies of the archaeology of the Texas Canyon and Dragoon areas (see Fulton 1934); however, no specific projects conducted by Fulton are included within the AZSITE or BLM records.

**Table 1. Previously recorded archaeological projects within 1.6 km (1 mile) of the project area**

Project No.	Project Name	Company
1978-35.ASM 1	Archaeological Clearance Survey of Arizona Department of Transportation Materials Pit 5313	Arizona State Museum
1982-82.ASM 2	Sullivan Mineral Lease Survey	Arizona State Museum
1987-222.ASM 3	U.S. Telecom Fiber Optic Survey	Dames and Moore, Inc.
1995-447.ASM 4	Arizona Electric Power Cooperative Apache to Hayden Transmission Line, Southeastern AZ	SWCA, Inc.
2005-302.ASM 5	AT&T NexGen/Core Project	Western Cultural Resources Management
2005-1509.ASM 6	Unknown	Not recorded
2006-497.ASM 7	Craycroft Rd. – Willcox Signing	Carter & Burgess, Inc.
BLM-AZ-040-13-023 <sup>1</sup> 8	I-10 MP 315 to Johnson Rd. TI	Jacobs Engineering Group, Inc.
P.A.S.T. 2010 9	Thing View Survey	Professional Archaeological Services and Technologies
2000-826.ASM 10	AT&T NexGen/Core Project Link 2 Class 3 Survey	Western Cultural Resources Management
2001-817.ASM 11	I-10 Willcox	Entranco, Inc.

Note: The projects in the project area are numbered separately at the end of the table.

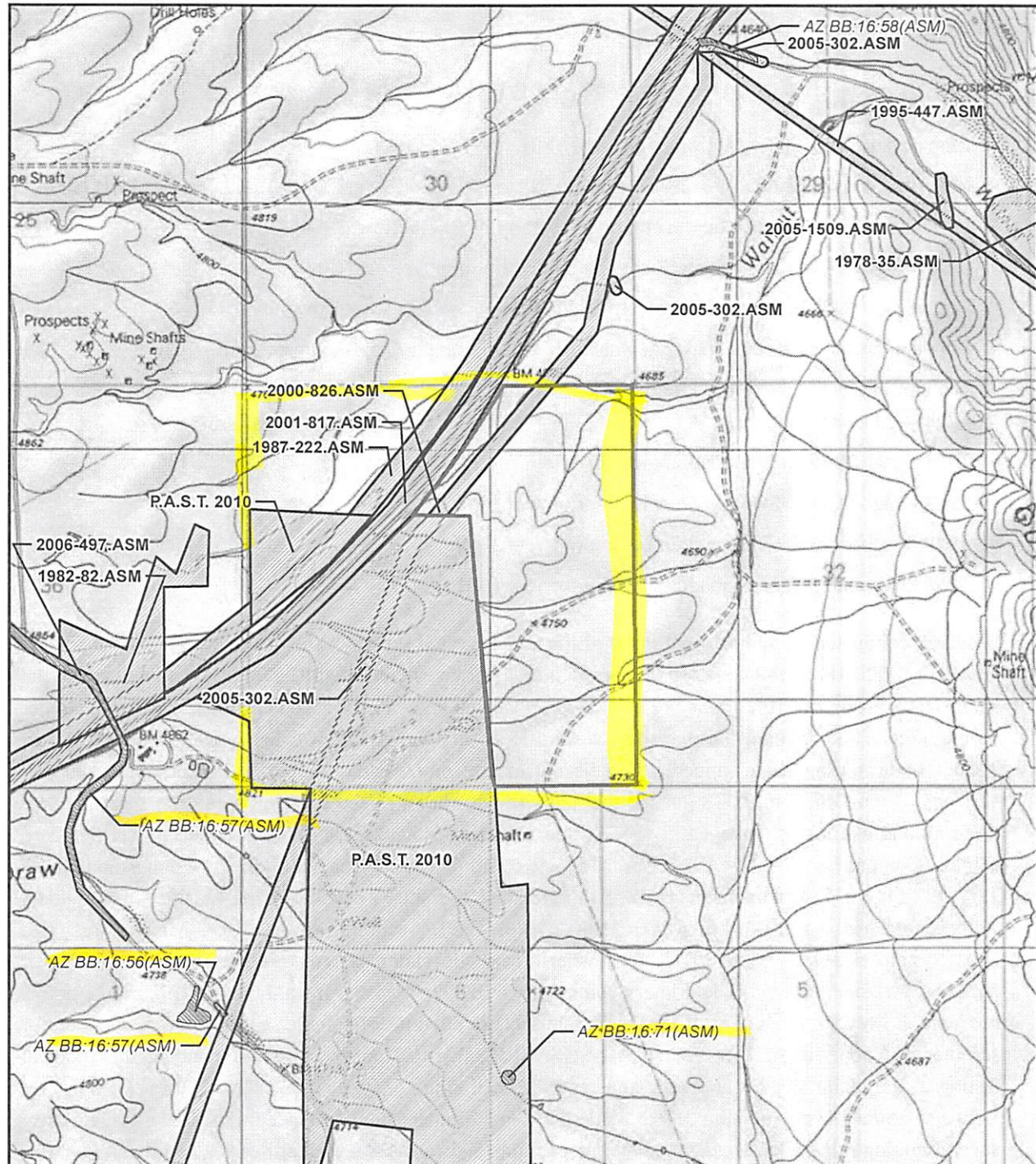
AZSITE documents four previously recorded archaeological sites within the 1.6-km (1-mile) buffer surrounding the project area. No sites have been previously recorded within the project area (*see Figure 3*). The sites in the vicinity are attributed to Native American and Euroamerican cultures.

**Table 2. Previously identified archaeological sites within 1.6 km (1 mile) of the project area**

Site	Cultural Affiliation
AZ BB:16:56(ASM) 1	Euroamerican
AZ BB:16:57(ASM) 2	Euroamerican, historic Johnson Road
AZ BB:16:58(ASM) 3	Euroamerican
AZ BB:16:71(ASM) 4	Native American Culture

<sup>1</sup> This project does not appear on *Figure 3* as the project area was not available from BLM records.





T15S, R23E, Portion of Section 31,  
Cochise County, Arizona  
Dragoon USGS 7.5' Quadrangle  
Projection: UTM NAD83, Zone 12  
Data Source: ArcGIS Online

WestLand Resources, Inc.  
Tucson • Phoenix • Flagstaff  
4001 E. Parashine Falls Drive  
Tucson, Arizona 85712 (520) 206-9585

0 0.2 0.4 Miles  
0 0.4 0.8 Kilometers



### Legend

- Project Area
- Archaeological Site
- Previous Survey

Figure 3. Previously recorded archaeological sites and projects within 1.6 km (1 mile) of the project area

## HISTORICAL MAP REVIEW

The following historical maps were reviewed prior to performing the field survey:

- Map of Cochise County, Arizona Territory, 1885
- Map of Cochise County, Arizona Territory, 1888
- Official Map of Cochise County, compiled by John A. Rockfellow, 1904
- Official Relief Map of Cochise County, compiled by John A. Rockfellow, 1914
- General Land Office plat for Township 15 South, Range 23 East, approved in 1919
- Supplemental Plat of Section 31, Township 15 South, Range 23 East, approved in 1922
- General Highway and Transportation Map, Cochise County, Arizona, prepared by the Arizona State Highway Department, 1937
- 1943 Dragoon 15' USGS quadrangle
- 1943 Dragoon 15' USGS quadrangle, imprint year 1948
- 1958 Dragoon 15' USGS quadrangle, imprint year 1959
- 1958 Dragoon 15' USGS quadrangle, imprint year 1961

Research conducted using historical maps of the area revealed several historical features near the project area. The 1885, 1888, 1904, and 1914 maps denote nearby settlements at Russelville and Hubbard to the southwest and Johnsonville to the north. The latter became known as Johnson Camp, a productive copper mining area. The supplemental plat of Township 15 South, Range 23 East, Section 31 shows the Legal Tender Lode mining claim immediately adjacent to the southwestern edge of the project area, and all versions of the Dragoon USGS quadrangle maps show mining features in this area. The Legal Tender Lode mining claim was surveyed in 1915 (Mineral Survey No. 3229) and was patented by the Standard Mining Company, headed by O. T. Smith, in 1916 (GLO Patent Number 540583; Cooper and Silver 1964:177). In 1915, improvements to the claim included “6 shafts, 1 cut and tunnel, 2 drifts, 1 station, and 1 stope, total value \$13041.00” (Mineral Survey No. 3229). According to the USGS Mineral Resource Data System (USGS MRDS 2014), the ownership of the claim passed to a Mrs. Thomas Adams of Dragoon, Arizona, in 1955. The primary commodity at the claim is copper, although no ore production is recorded; however, “a few tons of low-grade material are piled near the main shaft as though intended for shipment” (Cooper and Silver 1964:177; USGS MRDS 2014). Cooper and Silver conducted geological testing at the claim site in the 1940s and reported their findings in their 1964 work *Geology and Ore Deposits of the Dragoon Quadrangle*. While the Legal Tender claim is located outside the project area, several mining-related features, including prospect pits and cairns, were identified beyond the boundaries of the claim within the project area. These may be associated with the original period of production at the claim during the 1910s, or possibly during the middle decades of the twentieth century associated with Cooper and Silver’s work (1964). Ranching in the vicinity of the project area is represented on historical maps by several large cattle tanks west and southwest of the project area boundary. These appear as early as the 1943 Dragoon 15' USGS quadrangle. Several small cattle tanks were noted within the project area, but none of these are shown on historical maps, making their age uncertain.

## ENVIRONMENTAL SETTING

The project area is located within the Basin and Range physiographic province in a narrow basin formed by the Gunnison Hills to the east, the Dragoon Mountains to the southeast, the granite formations of Texas Canyon to the west, and the Little Dragoon Mountains to the northwest. The local landform consists of low finger ridges and intervening drainages, components of the alluvial fans that emanate from the Little Dragoon Mountains and Texas Canyon formations. The project area slopes generally toward the east-southeast and drainages flow in that direction toward a large drainage that feeds into nearby Big Draw. Elevations range from 4,840 feet above sea level (fasl) in the northwestern portion of the project area down to 4,730 fasl in the southeastern portion.

Sediments in the project area are generally alluvial and colluvial slope deposits of conglomerate bedrock and sandy loam with moderate- to high-density gravel and cobble deposits. The gravels and cobbles are made up of limestone, shale, quartz, and various sedimentary rock types. The nearby Legal Tender mining claim includes a small knoll composed of Horquilla Limestone, a “limestone with abundant thin beds of shale” (Cooper and Silver 1964), which was historically exploited by several mining operations.

The project area is located within the semidesert grassland biotic community (Brown 1994). Precipitation in this community typically ranges from 9.8 to 18 inches per year. The vegetation community is dominated by perennial bunch grasses, with some annual grasses and forbs and occasional yuccas and velvet mesquites. The biotic community of the project area appears to have been affected to a great extent by cattle grazing, as it has been invaded by shrubs, trees, and cacti. Typical species found throughout the project area are Lehman’s love grass (*Eragrostis lehmanniana*), scrub velvet mesquite (*Prosopis velutina*), sotol (*Dasyllirion wheeleri*), soaptree yucca (*Yucca elata*), beargrass (*Nolina microcarpa*), scrub acacia (*Acacia* sp.), turpentine bush (*Ericameria laricifolia*), ephedra (*Ephedra arenicola*), prickly pear (*Opuntia* sp.), cholla (*Cylindropuntia* sp.), barrel (*Echinocactus* sp.), ocotillo (*Fouquieria splendens*), agave (*Agave* sp.), various mammillaria cacti (*Mammillaria* sp.), low flowering forbs, and various grasses. Ground cover at the time of the survey was very dense, with approximately 75 percent cover (*see Photo 1*).

In general, the project area has been affected by relatively few modern impacts. Cattle ranching operations in the vicinity have generated disturbances related to grazing and trampling, and the construction of fencelines, ranch roads, and mechanically excavated earthen cattle tanks has also left its mark on the landscape. A 1970s-era electrical transmission line crosses the northeastern portion of the project area. Sparse modern trash is present.

## CULTURE HISTORY FOR SOUTHEASTERN ARIZONA

The brief overview of human prehistory presented here covers southeastern Arizona, arbitrarily bounded by the Middle San Pedro River Valley to the west, the international border to the south, the New Mexico Border to the east and by the Pinaleno and Winchester Mountain ranges to the north. This area is thought to represent a transitional cultural boundary during the last millennium of prehistory. This represents a variety of environments including mountain tops, river valleys and the bed of an ancient sea. This general geographic characteristic seems to have had a bearing on cultural developments and interactions in the region. The following cultural history outline will focus on the cultural sequence as it pertains to this portion of southern Arizona. A summary of the various culture histories relevant to this area is presented in *Chart 1*.

Arizona is a geographically diverse landscape from the high desert Colorado Plateau in the northeast, across the rugged central mountainous zone, to the southern and western lowland desert basin and range territories. Archaeological evidence indicates that people have adapted to and inhabited this diverse landscape for more than 12,000 years. Over the tenure of human history, the environment has changed radically from the cooler and moister conditions of the late Pleistocene epoch to the warmer and drier conditions of today. As the environment changed, and as human populations increased over time, a variety of human cultures developed. Although these cultures did not arise and develop in isolation from cultures in other regions, it is evident that cultures in different geographic regions followed unique trajectories. Without ascribing to a philosophy of environmental determinism, human cultural developments responded in unique ways to the biological, geological, hydrological, geographical, and physiographical diversity of Arizona. The long tenure of human prehistory and history in Arizona is divided here into five major periods representing shifts in the human cultural adaptation: Paleoindian (11,500–8500 B.C.), Archaic (8500 B.C.–A.D. 1), Formative (A.D. 1–1450), Protohistoric (A.D. 1450–1691), and Historic (A.D. 1691–1963). These five main periods are often subdivided into briefer periods to represent cultural trends and developments specific to the various regions across Arizona.

The earliest evidence of people inhabiting Arizona is attributed to the Paleoindian period. Paleoindians, as they are called, are perceived as migratory, nomadic, “big game” hunters who roamed North America at the end of the Pleistocene epoch. Using spears tipped with characteristically large fluted lanceolate projectile points, they hunted the now extinct megafauna of the terminal Pleistocene, particularly mammoth (*Mammuthus* spp.) and ancient bison (*Bison antiquus*) (Faught and Freeman 1998; Reid and Whittlesey 1997:30–37). The extinction of the large mammals and the warming and drying conditions of the Holocene epoch ushered in the Archaic period. Human populations responded to changes in the environment and resources by diversifying subsistence strategies; they hunted and gathered a broad spectrum of wild plant and animal resources (Mabry 1998; Mabry and Faught 1998). The Archaic period was punctuated by the hot and dry conditions of the middle Holocene “Altithermal” (Mabry 1998:30). A decrease in the number of sites during the middle Holocene has led to the hypothesis that there was a virtual withdrawal from the lowlands and a reduced occupation of the highlands in response to the hot and dry conditions (Mabry 1998:65). The number of Archaic period sites increases again between about 3300 and 600 B.C. as temperatures cooled and rainfall increased (Mabry 1998:29, 73).

Chart 1. Selected cultural chronologies from central and southern Arizona.

Period	ARCHAIC				FORMATIVE				PROTO-HISTORIC	HISTORIC		
	EARLY	MIDDLE	LATE		EARLY	MIDDLE	LATE					
11000	PALEO-INDIAN	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC
10000												
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	CHIRICAHUA STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000												SAN PEDRO STAGE
9000												
8000												
7000												
6000												
5000												
4000												
3000												
2000												
1000	SAN PEDRO STAGE	MIDDLE	LATE	EARLY	MIDDLE	LATE	EARLY	MIDDLE	LATE	PROTO-HISTORIC	HISTORIC	
9000												
8000												
7000												
6000												



The next significant step in the cultural development of Arizona is the introduction and development of agriculture. Current dating evidence places maize securely in the Southwest by 2100 B.C. (Merrill et al. 2009), but the transition to an agriculture-based subsistence adaptation developed later, around 1700–900 B.C. (Mabry 1998:73). The introduction of maize and the development of agriculture set the foundation for the cultural developments that followed. As a general statement, the ensuing Formative period is characterized by increases in population and the differentiation of these populations into the regionally distinctive cultural groups that we identify as the primary archaeological cultures of late prehistory, notably Ancestral Pueblo (Anasazi), Mogollon, Hohokam, Trincheras, and Casas Grandes. Prehistory in southern Arizona ends with the collapse of the late Formative period cultures and an apparent depopulation of the region. The subsequent Protohistoric period is poorly understood. Central and southern Arizona were sparsely occupied at first Spanish contact.

Early Spanish accounts of southern Arizona and the people provide the framework for what we know about the Protohistoric period. Spanish missionaries identified the peoples they encountered along the upper Santa Cruz and San Pedro Rivers as the Sobaipuri (Doelle and Wallace 1984, 1990; Gilpin and Phillips 1998:32; Masse 1981). The Sobaipuri apparently had occupied the territory since the end of prehistory and are hypothesized to have been the descendants of the prehistoric archaeological cultures in the region. The Athabaskan-speaking Apache occupied the vast mountainous regions below the Mogollon Rim in central and southeastern Arizona north and east of the Sobaipuri (Gilpin and Phillips 1998:68–70; Whittlesey 2003:243). The Apache probably entered the American Southwest late in prehistory and expanded their territory south across eastern Arizona. This expansion eventually brought the Apache into direct conflict with the Sobaipuri and later European settlers who were also expanding and colonizing southern Arizona. The Historic period commences with the arrival of Jesuit missionary Eusebio Kino and the establishment of Spanish missions and presidios in the Santa Cruz and San Pedro River Valleys in 1691. The Historic period can be characterized by increasing Euroamerican colonization, settlement, expansion, industrialization, and conflict (Spicer 1962). The Historic period is conventionally subdivided into Spanish, Mexican, and American periods reflecting shifts in governmental authority.

## **NATIVE AMERICAN OCCUPATION OF SOUTHEASTERN ARIZONA**

### **Paleoindian Period (Pre-8500 B.C.)**

The oldest evidence of human occupation in the Southwest is attributed to the Clovis complex. This complex is identified by a distinctive lanceolate spear point with a concave base, longitudinal fluting, and lateral and marginal grinding (Slaughter 1992:72). Several important Clovis sites are located in the upper San Pedro River Valley of southeastern Arizona, including Naco, Lehner, Escapule, and Murray Springs (Faught and Freeman 1998:41). Much of the evidence for a Clovis presence in Arizona comes from isolated occurrences of Clovis points (either whole or in fragments); for example, isolated Clovis points have been found in the St. Johns and Winslow areas, in Saguaro National Park East and Willow Springs in the Tucson Basin, in the Avra Valley area west of the Tucson Basin, near Kartchner Caverns in the San Pedro River Valley, along Big Wash near Oracle Junction, in the area south of Gila Bend, on the northwest bajada of the Pinaleno Mountains, and in the Sanchez area in the Safford Valley (Ayres 1970; Faught and Freeman 1998:44; Huckell 1984; Neily 1985:10; Seymour et al. 1997:1–8).



The Folsom complex succeeded the Clovis complex. Folsom, like Clovis, is identified by a distinctive style of projectile point. Folsom points are also lanceolate fluted spear points; however, Folsom points are distinguished from Clovis points by the extent of the fluting, which extends the full length of the blade, from the proximal end to the distal end. In addition, the margins of these points were retouched after fluting. In Arizona, Folsom points have been found only in surface contexts on the Colorado Plateau and in the mountainous Mogollon Rim country. No Folsom points have been identified in southern Arizona (Faught and Freeman 1998:45).

Plainview is a third Paleoindian tradition or tool complex that has been identified on the Colorado Plateau and in the southern Basin and Range province (although not, to date, elsewhere in Arizona). The Plainview tradition is attributed to the late Pleistocene or early Holocene period. Plainview points consist of several subtypes, including Meserve, Milnesand, and Belen points. All these points resemble Clovis points in their basic configuration, but they are unfluted (Faught and Freeman 1998:47). A Plainview point was discovered on the bajada of the Winchester Mountains in the Sulphur Springs Valley (Carlson et al. 1989). A few fragmentary projectile points resembling the Plainview type have also been found on the eastern Santa Catalina bajada and in the interior of the Tortolita Mountains (Huckell 1984). Later Paleoindian complexes have not been identified anywhere in southern Arizona (Faught and Freeman 1998).

#### Archaic Period (8500 B.C.–A.D. 1)

The Archaic period was characterized by the collecting of a broad spectrum of wild plant and animal resources for subsistence. The large Pleistocene animals hunted in the Paleoindian period had become extinct by the beginning of the Archaic period, although it has been suggested that the two subsistence strategies overlapped temporally and possibly spatially (Faught and Freeman 1998:50). The hunting of megafauna may have been an opportunistic component of what was otherwise a subsistence strategy resembling that typified by the term *Archaic*. Nevertheless, a rough temporal marker of 8500–8000 B.C. has been chosen as the starting point of the Archaic period, as it was around this time that a ground stone tool industry consisting (initially) of one-handed manos and slab metates became common across the Southwest (Huckell 1996:306, 327). This has been taken to imply that many plant resources (seeds in particular) were not exploited by people using Paleoindian subsistence strategies and that the beginning of the Archaic marks a broadening of the resource base.

The phrase *Archaic period* refers both to a division of time and the lifeway practiced by the ancient peoples during that time. Geographically, the period of time designated by archaeologists as the Archaic is subdivided into several regions spanning the Southwest as a whole. In the southern Basin and Range region of the Southwest, the broad cultural manifestation termed the *Archaic* is known as the Cochise culture. This culture is distinguishable from four co-traditions: the Colorado Plateau/Great Basin Complex, the Oshara Tradition, the Armagosa, and the Chihuahua Tradition. Temporally, the Cochise culture is subdivided into three broad divisions: Early, Middle, and Late.

The Early Archaic period (ca. 8500–6000 B.C.) of the Cochise culture is known as the Sulphur Springs phase. Sayles and Antevs (1941) originally defined this phase in the Sulphur Springs Valley in southeastern Arizona (Reid and Whittlesey 1997:44). Their archaeological work took place prior to the

advent of radiocarbon dating techniques, so there was no independent chronological evidence for dating this early Cochise manifestation. The absence of independent dates contributed to Sayles originally concluding that a Paleoindian tradition (typified by the exploitation of megafauna) co-existed with a hunting-and-gathering tradition that exploited smaller game and various plant resources (as reflected in an artifact assemblage composed of flat milling stones, unifacial scrapers, and other lithic implements). This assessment turned out to be incorrect; however, reexamination of the Sulphur Springs material did establish a reliable beginning date of ca. 8500 B.C. for the Sulphur Springs phase (Huckell 1996:339). Even though they have now been dated with certainty, the sites investigated by Sayles did not include any artifacts that were stylistically distinctive and, therefore, temporally diagnostic. There has been a lack of diagnostic projectile points recovered from Early Archaic sites in southern Arizona that can be directly correlated in time with the Sulphur Springs phase, and sites dating to this era are not always recognizable without direct methods of dating, such as radiocarbon (Huckell 1996:329).

The Middle Archaic period (ca. 6000–1200 B.C.) of the Cochise culture—known as the Chiricahua phase—is typified by the addition of shallow basin metates, mortars and pestles, various bifacial tools, and distinctive side-notched projectile points (Chiricahua points) to the overall tool assemblage (Freeman 1999; Huckell 1996:342; Mabry 1998). Generally, the Middle Archaic period was a time during which regional variations in the material culture across the Southwest became less pronounced. In particular, projectile points take on a similarity of design over large geographic regions (Mabry 1998). Chiricahua points, for example, are similar in style and manufacture technique to Northern Side-notched, Pinto, and San Jose points, all found in other areas of Arizona (Slaughter 1992:70). It is during the Middle Archaic period that evidence of permanent or semi-permanent domestic architecture appears, although bands of people probably remained highly mobile. The first Mesoamerican cultigens (including maize) also arrived in the Southwest during this period, perhaps as early as 2000 B.C. (Huckell 1996:343; Mabry 2005:114).

The Late Archaic period (ca. 1200 B.C.–A.D. 1) appears to have been a time of increasing adaptation to agriculture as the primary subsistence strategy. The prevalence of maize agriculture has led some researchers to refer to this period as the Early Agricultural period (Huckell 1996). It remains unclear whether the adoption of agriculture along with its corresponding changes in social and political relationships and settlement patterns occurred simultaneously across the Southwest. The earliest direct dating of maize from various parts of the Southwest suggests an essentially contemporaneous adoption of this cultigen about 4,000 years ago (Mabry 2005). However, adaptations to this early agricultural product were not the same in all regions, with many people retaining a way of life that could continue to be characterized as Archaic (Diehl 2005; Huckell 1996). Hunting-and-gathering practices remained a vital subsistence strategy throughout the Late Archaic/Early Agricultural period as evidenced by macrobotanical, zooarchaeological, and human osteological data (Diehl 2005:182). Additional evidence suggests that some groups did not cultivate maize at all. The Coffee Camp site, for instance, at the southern edge of the Santa Cruz Flats provides evidence of a semi-sedentary lifestyle coupled with a continued reliance on wild plant and animal resources (Halbirt and Henderson 1993).

In the south, the Cochise culture entered its penultimate cultural stage, the San Pedro phase (1500–800 B.C.), which was named for the type-site first investigated by Sayles on the San Pedro River (Sayles and Antevs 1941). Apart from its distinctive corner- and side-notched projectile points, the San Pedro phase is typified by 1) small oval pithouses, often with large interior bell-shaped storage pits and similar

extramural pits (both of which reflect the importance of storage in a subsistence economy that includes the growing of crops); 2) flexed inhumations; 3) refinements in ground stone technology; and 4), in the Santa Cruz River Valley, canal-irrigated farming. Also notable during the Late Archaic period was a ceramic tradition of figurines, beads, and miniature vessels (Heidke 2005; Stinson 2005). Although the miniature vessels are argued to be incipient pottery (Heidke 2005), these objects have decorative qualities reminiscent of baskets and are similar to ceramic effigies found in Early Formative period contexts at other sites (Haury 1976). Late Archaic incipient pottery may be part of the ceramic effigy tradition.

Until relatively recently, the San Pedro phase was considered the final stage of the Cochise culture. Archaeological work in Tucson and other areas, however, has unearthed evidence that has led to the definition of an additional phase, the Cienega phase, for the final pre-ceramic stage of the Cochise culture in southern Arizona (Gregory 2001:253; Huckell 1996:345). The Cienega phase, in contrast to the earlier San Pedro phase, is characterized by round, rather than oval, pithouses; distinctive projectile points with deep diagonal corner-notching (Cienega points); and a more diverse ground stone artifact assemblage (Huckell 1996:345; Stevens and Sliva 2002:300). The date range proposed for this phase is ca. 800 B.C.–A.D. 150 (Gregory 2001).

#### **Formative Period (A.D. 1–1450)**

The Formative period is differentiated from the Archaic period by the addition of pottery to the material culture repertoire. The Formative period in southern and central Arizona is typically considered synchronous with the tenure of the Hohokam culture; however, this may not be the case (see Deaver and Ciolek-Torrello 1995; DiPeso 1956). Two different explanations of this portion of prehistory are available. The first is the Hohokam cultural chronology, which has been the standard for most archaeologists. The second is an alternative explanation that divorces itself from the developmental dynamics of a specific culture area by, instead, linking its divisions to cultural processes, trends, and events that occurred synchronously across a broad area.

The Hohokam culture is segmented into a sequence of four cultural periods. From oldest to youngest, these are the Pioneer, Colonial, Sedentary, and Classic periods (Gladwin 1965; Haury 1976, 1978). In their original formulation, these periods represent the thesis that the Hohokam culture derives from Mesoamerican immigrants who “pioneered” a new way of life in the Gila and Salt River Valleys of Arizona. After a few centuries of development, the descendants of the original immigrants “colonized” most of the adjoining river valleys of central and southern Arizona using their sophisticated technological, social, political, and religious systems. Once in place, the Hohokam colonists became “sedentary” agriculturalists. In a few centuries, the Hohokam culture reached its zenith, or “classic” cultural development.

The Hohokam cultural sequence was formulated on the notion that the valleys radiating outward from the Gila and Salt Rivers were uninhabited or that the bottomlands were unused by the indigenous Archaic peoples (Haury 1976). An alternative model for southern Arizona was formulated by DiPeso (1956), who postulated that the river valleys were already inhabited by agricultural peoples whom he referred to as the O’otam. In DiPeso’s scenario, the O’otam were subjugated by the Hohokam, but after a few centuries freed themselves from Hohokam oppression.

Two theories on the origins of the Hohokam culture dominate the literature: first, that it derived from immigrants who ascended to dominance because of their impressive technologies and scale of cultural development; and second, that it derived from an in-place development from the preceding Late Archaic culture whose Mesoamerican overtones resulted from the transmission of knowledge and ideas across vast regions. Recent archaeological evidence provides resounding proof that the river valleys of central and southern Arizona were inhabited and farmed during the Late Archaic period by relatively substantial populations of indigenous peoples endowed with technologies and a scale of cultural development more impressive than previously accepted.

This new evidence also reveals that over a very large area, the first pottery-making peoples shared similar subsistence technologies, architectural forms, tool assemblages, mortuary customs, and other cultural traits (Deaver and Ciolek-Torrello 1995; Whittlesey et al. 1994a). These shared similarities encompass the regions that are conventionally recognized as the Hohokam, Mogollon, and Ancestral Pueblo (formerly known as the Anasazi) culture areas.

The alternative to the Hohokam cultural sequence, one which considers recent archaeological evidence, is a tripartite division of the Formative period into three smaller periods referred to simply as Early, Middle, and Late. This three-part division of the Formative period closely corresponds to DiPeso's (1956) outline of prehistory. The Early-Middle-Late divisions also thematically correspond to DiPeso's outline, which recognizes the Hohokam culture as a major influence in the prehistory of central and southern Arizona. The Early, Middle, and Late Formative periods are equivalent to DiPeso's Formative O'otam, Hohokam Intrusion, and O'otam Reassertion periods, respectively. Put quite simply, the Early-Middle-Late divisions represent the time before the Hohokam, the time of the Hohokam, and the time after the Hohokam (Deaver and Van West 2001:20–24).

The three Formative periods also generally correspond to the Hohokam cultural sequence (Gladwin et al. 1937; Haury 1978). The Early Formative period encompasses the Pioneer period through the end of the Sweetwater phase. The Middle Formative period begins with the Snaketown phase of the Pioneer period and covers the Colonial and Sedentary periods. The Late Formative period corresponds to the Classic period. The slight mismatch in the two sequences results from looking at Hohokam prehistory from the so-called Hohokam peripheries: the Papaguería, the Tucson Basin, the upper and lower Santa Cruz River Valleys, the Gila Bend region, the San Pedro River Valley, the Safford Basin, southeastern Arizona, and the Tonto Basin.

The cultural traditions in these peripheries were affected by far-reaching cultural, environmental, and cosmological phenomena. These phenomena provided a similar structure and rhythm to the prehistoric traditions seen in all the regions. However, the cultural expressions and trajectories of each of these peripheries were singularly unique. It was the responses by the indigenous peoples to these far-reaching phenomena that gave rise to unique local culture histories.

### ***Early Formative Period (A.D. 1–700)***

Trends set in motion during the 1,500 years spanned by the Late Archaic period continued uninterrupted well into the first millennium A.D. Early Formative period peoples continued along the course toward

reliance on agriculture, sedentary village life, and refinement in adaptive strategies that eventually led to the emergence of the regional cultural traditions recognizable as the Hohokam, Mogollon, and Ancestral Pueblo (Deaver and Ciolek-Torrello 1995).

Similarities in settlement locations and flaked and ground stone industries, and the practice of a mixed agriculture and foraging subsistence strategy revealed by previous and modern archaeological findings support the thesis of continuity between the Late Archaic cultures and the formative, pottery-making, sedentary agricultural cultures across the southern Southwest (Bowen 1976; Cable and Doyel 1987; Ciolek-Torrello 1998; DiPeso 1956, 1979; Doyel 1995; Elson and Lindeman 1994; Gilman 1995; Haury 1957, 1986; Hayden 1970; Johnson 1960; McGuire and Villalpando C. 1993; Roth 1996; Sayles 1945; Schroeder 1957; Wallace et al. 1995). The Early Formative period was not, however, simply the Late Archaic with pottery. The adoption of a pottery technology, the eventual elaboration in the forms and uses of pottery, the construction of more formal and larger houses, the shift from circular to rectangular floor plans, and the building of more permanent and enduring settlements were indicative of a new configuration in economic and social organization (Ciolek-Torrello 1998:254; Whittlesey and Ciolek-Torrello 1996:50).

The addition of pottery containers to the Early Formative period material repertoire was one of the first new technological innovations. Three pottery horizons that serve as chronological markers are recognized for the Southwest during this period: the Plain Ware horizon (A.D. 1–400); the Red Ware horizon (A.D. 400–650); and the Broadline horizon (A.D. 650–700) (Deaver 1989a, 1989b, 1998; Deaver and Ciolek-Torrello 1995). The broad trends in pottery development from plain wares to red wares to broad-line-painted wares provide a convenient tool for monitoring cultural developments and recognizing differences among groups in various regions.

#### ***Middle Formative Period (A.D. 700–1150)***

The trend toward agriculturally dependent sedentary societies was essentially complete across most of southern Arizona by the Middle Formative period. Settlements were located in two general zones: along the rivers and the mountain fronts. Agricultural products were clearly the mainstay of the subsistence economy—principally the triumvirate of maize, beans, and squash—but foraging for native foods and the hunting of small and large mammals remained an important aspect of the subsistence regime. Despite similarities in the general pattern, local and regional variations still existed. The repertoire of food-producing and food-gathering techniques was sufficiently diverse and the level of social organization sufficiently well developed to allow groups to adapt to a variety of environments.

The defining theme of the Middle Formative period is the rise and fall of the Hohokam as a regionally influential force, one that would alter the flow of prehistory over much of southern Arizona. Sometime during the Early Formative period, along the middle Gila River between its confluence with the Salt River and the modern town of Florence, there was a group of people whose descendants would come to exert considerable influence over much of southern Arizona: the Hohokam. To some extent, this culture touched the lives of peoples across most of the greater Southwest, including portions of northern Mexico. The Middle Formative period corresponds generally to DiPeso's (1956, 1979) Hohokam Intrusion period for southern Arizona and to the late Pioneer, Colonial, and Sedentary periods of the Hohokam chronology (Gladwin et al. 1937; Haury 1976).

Hohokam is an agrarian culture defined by a unique set of cultural characteristics. They occupied the lower Sonoran Desert and grew corn, beans, squash, and cotton. The people practiced a variety of agricultural techniques, but are most famous for the extensive irrigation systems along the middle Gila River and the lower Salt River of the Phoenix Basin. They made a distinctive red-on-buff pottery and a plain ware with a unique micaceous sheen. They lived in brush-and-earth structures constructed in shallow pits, usually arranged in courtyards. They practiced a cremation death ritual that often included the burning and breaking of funerary offerings. They were artisans who manufactured shell jewelry, turquoise mosaics, slate palettes, pyrite mirrors, clay figurines, and distinctive serrated points. They are also well known for their naturalistic depictions of animals and people in a variety of media, including pottery, shell, and stone. They practiced ceremonies that involved the use of structures referred to as ballcourts and elevated mounds. Many characteristics of the Colonial period seem to have occurred without earlier precedents, leading to the inference that an infusion of new traits and characteristics took place at the beginning of this period.

The Hohokam culture area covers most of southern and central Arizona. Conventionally, this area of influence is perceived as a cultural core with peripheries. The core area is the only place with the complete complement of Hohokam cultural traits. The explanation has been offered that the Hohokam culture was composed of a network of interconnected and interrelated settlement systems. Current archaeological evidence indicates that the various settlement systems that comprise the Hohokam regional system developed in place over a millennium or more prior to the emergence of a distinctive Hohokam culture.

The middle San Pedro region is located between the traditionally defined peripheries of the Hohokam and Mogollon cultural regions. During the Middle Formative period in the San Pedro River Valley and adjacent areas, the Dragoon culture emerged, an apparent variation of the San Simon Branch of the Mogollon (Heckman 2000:43–62), the prehistoric people inhabiting the mountainous regions of central Arizona and west-central and southwestern New Mexico (Reid and Whittlesey 1997). This variation is considered the result of a strong Hohokam influence on the San Simon peoples inhabiting the middle and upper San Pedro River Valley between A.D. 700–1100 (Heckman 2000:43–45; Vanderpot and Altschul 2007:61, 62; Whittlesey et al. 1994b:65–82). Archaeologists have proposed a temporal sequence for the Dragoon culture which, like the San Simon, was formulated relatively early in the history of southwestern archaeology and remains tentative pending additional work in the San Pedro River Valley.

The term *Dragoon* was introduced by William S. Fulton in 1934 (Fulton 1934) to describe pottery recovered from excavations in Texas Canyon. In 1940, the term was used again by Fulton and Carr Tuthill to describe the pottery—and the culture that produced it—at the Gleeson site (Fulton and Tuthill 1940). Tuthill later refined the phase sequence based on excavations at AZ BB:15:1(ASM), the Tres Alamos site (Tuthill 1947), and postulated two phases for the Dragoon culture: the Cascabel and Tres Alamos phases. Dragoon Red Ware and Cascabel Red-on-brown Ware were the characteristic local ceramic types during the Cascabel phase and Tres Alamos Red-on-brown Ware appeared during the Tres Alamos phase (Heckman 2000:45). The Cascabel and Tres Alamos were succeeded by the Tanque Verde and Tucson phases, the Tucson Basin Classic period phases (referred to as the Late Formative in the present work). According to Tuthill's findings, Dragoon pottery was not found in the strata at Tres Alamos dating to this time, but Tanque Verde Red-on-brown and Gila Polychrome were present.



In southeastern Arizona, “mixed” Hohokam and Mogollon cultural traits may indicate a similar amalgam of several distinct cultures. Alternatively, the sequential occupation or co-residence of diverse cultural groups is another distinct possibility, as suggested by the mixed ceramic assemblages, Mogollon- and Hohokam-style pithouses, and inhumations and cremations at sites such as Second Canyon Ruin (Whittlesey and Heckman 2000:10). At Tres Alamos, a similar co-occurrence of traits was observed by Tuthill; for example, Mogollon San Francisco Red Ware and Rincon Red-on-brown Ware are present alongside the local Dragoon Tres Alamos Red-on-brown Ware during the Tres Alamos phase (Heckman 2000:45).

Farther to the north, the people of the lower San Pedro River Valley appear to have followed a settlement pattern paralleling that of the Tucson Basin, with a florescence of villages accompanied by ballcourts during the Colonial period (and to a lesser extent during the Pioneer period); contraction and reorganization of the village system during the middle Sedentary period; and general abandonment around the end of the Sedentary and the beginning of the Classic period (Gregory 1991:175).

In the latter portion of the Middle Formative period, the supreme influence of the Hohokam cultural system on populations in southern Arizona diminished. This can be documented in the material culture, architecture, and settlement patterns. For example, the importation of red-on-buff painted pottery from the Gila River to outlying areas slowed dramatically around A.D. 950 (Wallace 1988; Wilcox 1987). In its place, a number of local ceramic series evolved that imperfectly emulated Hohokam Sedentary-style decorations, but were clearly produced from local clays with a non-Hohokam technology (Deaver 1989b; Greenleaf 1975; Wallace 1986). Across southern Arizona, ballcourts were largely abandoned as integrative features of the community by about A.D. 1000 and widespread shifts in settlement location and configuration occurred (Doelle et al. 1987; Ferg et al. 1984). In short, the changes of the post-A.D. 950 period are sufficiently dramatic to suggest that populations of southern Arizona again functioned as independent political and economic systems sometime after the middle of the tenth century A.D.

#### ***Late Formative Period (A.D. 1150–1450)***

After the decline of Hohokam influence across southern Arizona, another series of sweeping regional changes occurred. In southern and central Arizona, these changes signaled the advent of the Late Formative period, a time of distinctive forms of architecture and settlement, styles of painted pottery, and patterns of interaction. Influence was no longer peddled from the Hohokam core area but, rather, now flowed from northeast to southwest. This was a time of migration, with peoples from the Kayenta region of the Colorado Plateau moving southward into east-central Arizona (Woodson 1999, 2006). It was also a time when Paquimé (Casas Grandes) in Chihuahua, Mexico, emerged as a center of regional influence (DiPeso 1974). But numerous local centers developed, too, probably as part of a natural reorganization of people in response to the vacuum left by the Gila River Hohokam. Local systems flourished at the expense of regional systems, and within localities, districts were abandoned and new communities and community centers emerged. Influential local systems existed in northern Mexico, in the middle and lower San Pedro River Valleys, in the Papaguería, and in the Tucson Basin. The development of new sociopolitical and economic relationships is inferred from the pattern of indigenous and exotic ceramics in archaeological assemblages. In the Tucson Basin, for example, Tanque Verde Red-on-brown was produced with a vigor not reflected by its Gila Basin counterpart, Casa Grande Red-on-buff. Similarly, to

the east in the Safford region, San Carlos Red-on-brown (a stylistic homologue of Tanque Verde Red-on-brown) was also produced with a vigor unmatched in the Gila Basin. In addition, the influx of pottery from the San Pedro River Valley, the Tonto Basin, and the Cibola region (Wallace and Holmlund 1984:176, 177) suggests that a more sustained interaction with peoples to the southeast and northeast was taking place. Eventually, a new style of pottery, the so-called Salado polychromes, appeared in east-central Arizona, eventually spreading over most of central and southeastern Arizona.

It is evident that late in the Formative period, a new way of life that had many of the physical manifestations of puebloan culture appeared across most of southern Arizona. The mechanisms that promoted the spread of this culture appear to have involved the southerly and southwesterly migrations of puebloan peoples from the southern margins of the Colorado Plateau as well as the adoption of puebloan-like characteristics by indigenous populations. This interaction may not have been amicable and warfare may have been common.

The Late Formative period ends sometime around A.D. 1450 with the disappearance of the Late Formative period cultures in southern Arizona from the landscape and the abandonment of the major Formative period settlements in the Salt and Gila River Valleys, in the Tucson Basin, and in the rest of southern Arizona. Various competing theories have arisen to explain this cultural change. With regard to the Hohokam culture area to the north along the Salt and Gila Rivers, soil salinization as a result of intensive irrigation with alkaline water, water-borne diseases spread through canal systems, overpopulation leading to resource depletion, social and political reconfiguration, raiding and warfare, internal strife, climatic change in the form of floods and droughts, or some combination of these have all been proposed (e.g., Abbott 2003; Ackerly 1982; Andrews and Bostwick 1997). With regard to the other areas of southern Arizona that were not dependent on a similar level of social organization or on extensive networks of irrigation canals, other factors may have been at work. These factors remain as theories and are largely speculative. Little hard evidence is available to reveal what happened at the end of the Formative period. What is clear is that when the Spanish first entered the southwestern United States less than a century later, the large Late Formative period settlements across southern Arizona were long abandoned and the history of these prehistoric cultures had already passed into the folklore of the native peoples that the Spanish encountered.

#### **Protohistoric Period (A.D. 1450–1691)**

The Protohistoric period—an obscure period in the history of the Southwest—falls between the Late Formative period and the arrival of the Spanish missionaries. This period is not well represented in the archaeological record, yet early Spanish explorers documented their encounters with people who were well established in some areas of the Southwest. The discussion of this period is based on historical accounts of newly arriving Europeans, linguistic relationships among indigenous peoples, and native oral traditions.

Spanish exploration of the Southwest began as early as 1539 with the preliminary scouting expedition of Fray Marcos de Niza, who had been sent to the region by Mexican viceroy Antonio de Mendoza in response to the accounts of Alvar Núñez Cabeza de Vaca and Moroccan slave Estevan. Cabeza de Vaca and Estevan had wandered to Sonora after being shipwrecked in the Gulf of Mexico in 1528. After

de Niza returned, Viceroy Mendoza proposed a larger expedition and selected Vásquez de Coronado as its leader. Coronado's party departed in 1540 in search of the fabled Seven Cities of Cibola. The route of the expedition probably took Coronado through what is now eastern Arizona, although it has been speculated that one stop on the journey, Chichilticale or "Red House," was in fact the Hohokam adobe house at Casa Grande. A preliminary scouting party led by Melchior Diaz had preceded Coronado and journeyed up the San Pedro River, exploring the area around the Gila-San Pedro confluence to the "east and west." The exact extent of this survey is unknown, however (Wilson 1999:25, 26).

Who were the native peoples encountered by the Spanish? One thought is that the people living in southern Arizona were the direct descendants of the prehistoric peoples whose numbers and culture had been reduced by the social and economic changes that marked the end of the Formative period. Another is that they were Piman-speaking peoples who had moved into the area after the collapse of the prehistoric cultural traditions. They may not have found the region to be completely abandoned and, perhaps, were integrated with the descendants of the prehistoric cultures, a possibility suggested by oral tradition (Teague 1993:444).

Around A.D. 1500 or earlier, bands of Athabaskan-speaking groups with a linguistic affinity to native peoples in Alaska, Canada, and northern California began arriving in the region of the southern Colorado Plateau and the mountainous region below the Mogollon Rim (Stein 1994:10, 11; Whittlesey 2003:243). The exact route and timing of the Athabaskan migration into the Southwest has not been fully resolved, but most scholars agree that it occurred late in prehistory (Whittlesey 2003). Soon after their arrival in the Southwest, the Navajo and the Apache separated as distinct cultural groups (Whittlesey 2003:243). The Apache settled in the mountainous regions of the greater Southwest while the Navajo settled around the Four Corners area. The Apache moved into upland areas that contained no large populations of other native peoples and that had apparently been unpopulated since the exit of the Mogollon, Salado, and Hohokam cultures from the Mountain Transition Zone late in prehistory (Whittlesey 2003:242). The Apache are composed of six major tribes: the Jicarilla, Lipan, Mescalero, Chiricahua, Kiowa-Apache, and Western Apache (Goodwin and Basso 1971:12). The Western Apache territory was vast, encompassing much of the mountainous region of south central Arizona (Whittlesey 2003). The homeland of the Central Chiricahua Apache was southeastern Arizona, centered in the Dragoon, Dos Cabezas, and Chiricahua Mountains, but also ranging north to the Gila River, south to the Sierra Madre, and east into southwestern New Mexico (Sweeney 1991).

Apache territory was ecologically varied, with high mountain peaks, desert areas, and lush river valleys. Apache bands practiced a hunting-and-gathering subsistence strategy supplemented by limited horticulture. Wild plant foods collected by Apache groups in the upland areas included acorns from the Emory oak, juniper berries, and the hearts of agave (Goodwin 1942). Large game, wild fowl, and rodents were hunted (Goodwin 1942). According to Goodwin (1937:61), agricultural products made up only 25 percent of the yearly diet, the remainder being a combination of undomesticated plants, game animals, and stolen livestock. Raiding activities constituted an important part of Apache culture. The Apache would periodically raid Mexican, Anglo, Pima, Maricopa, Navajo, and Papago settlements (Goodwin and Basso 1971). Because of this dependence on raiding, conflicts between Apache groups, native agricultural peoples, and Europeans would continue through the Spanish, Mexican, and American periods until Apache suppression by the U.S. Army in the 1870s. The Apache conflict in the region would end for good in 1886 when Geronimo and the Chiricahua Apache surrendered to the U.S. Army at Skeleton Canyon near Apache, Arizona.

Apache social organization was based on small mobile groups exempt from an overall political authority (Goodwin 1942). These local groups, connected by kinship and social and economic ties, would generally include four to five households or *gowas* (Apachean brush structures also known as *wickiups*) (Goodwin 1942). These local groups were part of a larger clan that regulated social relationships and obligations (Goodwin 1942). The clans, as with the rest of Apache society, were matrilineal.

Apache material culture, as would be expected from a highly mobile people, was based on expedient, easily transported containers and tools made of basketry, wood, and fibers (Whittlesey 2003:247). The Apache also produced an unrefined pottery and scavenged and reused tools from prehistoric sites (Whittlesey 2003:247).

## **EUROAMERICAN OCCUPATION OF SOUTHEASTERN ARIZONA**

### **Historic Period (A.D. 1691–1950)**

The Historic period begins in 1691 with the establishment of the mission system in the Santa Cruz River Valley following the arrival of Jesuit missionary Eusebio Kino. Kino made his first forays into the valley in 1691 (to Tumacácori) and 1692 (to San Xavier del Bac) (Wilson 1999:12, 13). After a poorly documented visit to the Casa Grande area in 1694, Kino made a second *entrada* to the area in 1697 (Wilson 1999:24). Setting out from the Nuestra Señora de Dolores mission, Kino traveled north along the San Pedro River and then followed the Gila River to the west, arriving at Casa Grande on November 18, 1697. He was accompanied by Captain Juan Mateo Manje and approximately 20 soldiers and native guides. Manje, unlike Kino, kept well-written journals of his travels. The chronicle of this expedition makes note of small groups of people living along the San Pedro River, identified as the Sobaipuri (Doelle and Wallace 1990; Masse 1981), and also mentions many abandoned villages along the river corridor. These were most likely recently abandoned Sobaipuri villages, although he may have included prehistoric sites as well (Masse 1980). The chronicle also notes “six or seven” Piman *rancherías* along the Gila River in the area around Casa Grande. This appears to be the first known reference to the Pima by Europeans (Debowski et al. 1976:30).

The missionaries identified the groups of people inhabiting southern Arizona and northern Sonora as Upper and Lower Pimans, or *Pimas Altos* and *Pimas Bajos*. The *Pimas Altos*, or the people inhabiting the *Pimería Alta* (which includes the Santa Cruz and Gila Rivers as well as the adjacent desert regions), were described by the Spanish missionaries as consisting of four broad groups: the Pimas, inhabiting the southeastern portion of the *Pimería Alta*; the Papabotas, inhabiting the desert areas and later known as the Papagos (and today as the Tohono O’odham); the Sobas, supposed followers of a man named Soba in the southwestern *Pimería Alta* (and unlikely a distinct cultural entity); and the Sobaipuris, inhabitants of the north and northeastern areas, or the San Pedro and Santa Cruz River Valleys (Spicer 1962:119, 126–128; Wilson 1999:20). The subsistence strategies practiced by these native peoples included the procurement of wild resources (with melons and bighorn sheep being particularly important sources of food) and floodwater farming. It appears uncertain if irrigated agriculture was being used at this time (as it had been during the Hohokam era), although a 1699 account by Captain Manje states that the Pima did not make use of canals to irrigate their crops and relied upon floodwater (Wilson 1999:38). However, people in the San Pedro River Valley are mentioned obliquely by Kino during an earlier visit as cultivating cotton by irrigated agriculture.

Owing to the work of “Padre” Kino, missionary efforts in the *Pimería Alta* continued into the early eighteenth century. After Kino’s death in 1711, however, the mission system in Sonora began to deteriorate, partly the result of neglect while Spain was distracted by the War of the Spanish Succession (Walker and Bufkin 1979:14). By 1750, most of the people occupying the San Pedro River Valley had been forced to move to the Santa Cruz and Altar Valleys due to Apache raiding. This turned out to be only a temporary solution, as the Apache began raiding these locations as well. In 1762, the remaining Sobaipuri populations were moved out of the San Pedro River Valley to replace Pima who had succumbed to disease at the Guevavi Mission in the Santa Cruz River Valley. These people either died or were absorbed into the Pima populace, thus ending the existence of the Sobaipuri as a distinct cultural group (Walker and Bufkin 1979:12).

Incursions by the Apache continued unabated. Beginning around 1790, as a means of bringing raiding to a halt, the Apache were provided with supplies, an action by the Spanish government that allowed for the expansion of ranching and stock raising in what would eventually become southern Arizona. This time of relative peace ended with the independence of Mexico from Spain in 1821. With Spanish support no longer available, ranching became unviable as the Apache once again began their raiding activities (Morrisey 1950:151).

Between 1827 and 1846 (the beginning of the Mexican-American War), Anglo-Americans began to establish a substantial presence in the middle Gila River region. The first Americans to enter the area appear to have been Sylvester and James Ohio Pattie, father and son beaver trappers who made several trapping excursions along the San Pedro, Gila, and Colorado Rivers during the years 1825 and 1826 (Walker and Bufkin 1979:17). In 1846, Colonel Stephen Watts Kearny, who had been charged with establishing American control of California and the Southwest during the war, followed the Gila River west toward California after securing New Mexico. Along the way, he met Lieutenant Christopher “Kit” Carson, who informed him that the war in California was essentially over. Kearny continued westward with a small contingent of men, sending the rest back to New Mexico. Kearny followed the river, passing by the Pima villages. When he reached California, he found that Carson had exaggerated and that the hostilities there were not quite at an end. Nevertheless, his trip had not been wasted as it provided the opportunity for the first reliable mapping of the Gila River. Also in 1846, a group of Mormon soldiers led by Philip St. George Cooke blazed a trail across Arizona, leaving a detailed record of the area at that time.

The Treaty of Guadalupe Hidalgo ended the Mexican-American War in 1848 and established the Gila River as the Mexican-American border from the western boundary of New Mexico to the confluence of the Gila and Colorado Rivers. Following the discovery of gold in California in 1849, the Gila Trail—as the route established along the Gila River by Kearny had come to be known—became a major thoroughfare for would-be gold miners on their way to California.

In 1853, the Gadsden Purchase expanded Arizona from the Gila River south to the present-day Mexican border. Although the lands included in the Gadsden Purchase had already been used for ranching, Arizona’s ranges were now open for ranching activities on a large scale. The increase in population in California since 1849 had resulted in a significant beef market, and Arizona became a thoroughfare for cattle being driven from Texas to California. Within Arizona itself, military garrisons and a growing mining industry also provided a need for beef (Morrisey 1950:151, 152). The American military arrived in Tucson in 1856.

The Dragoon Mountains were named for the 3<sup>rd</sup> U.S. Cavalry, known as Dragoons, who were stationed in the mountains during the 1850s (Trimble 1986). The Dragoon Mountains provided an ideal hiding place for the Apache chief Cochise and his warriors during the raiding forays of the mid- to late-1800s, and the Dragoons were sent to rid the Arizona Territory of the Apache threat. Cochise, who died of natural causes in 1874, was buried in Cochise Stronghold in the Dragoon Mountains.

The Butterfield Overland Stage had a station at the north end of the Dragoon range in 1858, at what was called Dragoon Springs. The town of Dragoon lies roughly 2 miles north of the old station. In 1863, the Arizona Territory was established after successful lobbying by Charles D. Poston. One year before, in 1862, the National Homestead Act offered land tracts of 160 acres at \$1.25 per acre or 80 acres at \$2.50 per acre for land within a railroad grant (Stein 1990:4). This began a series of homesteading acts that eventually led to the Stock-Raising Homestead Act of 1916, which sparked a boom in homesteading in Arizona that lasted between 1910 and 1940 (Stein 1990). Ranching and cattle raising in southern Arizona were closely associated with homesteading.

The railroad arrived in the early 1880s, bringing with it an economic and social connection to the rest of the United States. Several months before the Southern Pacific Railroad reached Tucson in 1880, speculators laid out a townsite on Cochise Pass, the highest point on the railroad as it crossed Arizona (Myrick 1975). This townsite was named Dragoon City, and Cochise Pass soon became Dragoon Summit or Dragoon Pass, and eventually just Dragoon. Interest in the Cochise (Johnson) Mining District several miles to the north began around the same time following mineral discoveries in 1879 by several individuals who located claims around Cottonwood Creek. The individual claims were transferred to several mining companies: the Dragoon Gold and Silver Mining Co., the Rex Gold and Silver Mining Co., and the Russell Gold and Silver Mining Co.

In 1883, Dragoon was the place where Montgomery & Benson's Stage met the Southern Pacific trains for passengers heading to nearby Russellville and Johnson, newly established towns in locations of lucrative claims (Myrick 1975). It was a "rather diminutive" settlement, consisting of section houses, a railroad ticket office, and a saloon (Myrick 1975:334). Declining copper prices and increased production costs caused the copper industry to languish until the turn of the century, when the demand for electricity led to an increased demand for copper. The Johnson, Dragoon, and Northern Railroad was completed in 1909, connecting the Southern Pacific from Dragoon to Johnson. The railroad was meant to stimulate mining activity in Johnson, which it did until it was absorbed by the Southern Pacific in 1911. The railroad was abandoned in 1925.

The stock market crash on Black Tuesday, October 29, 1929, ushered in the Great Depression and a world-wide economic downturn. This decline in the industrial economy coincided with extensive droughts in many parts of the United States, including Arizona, in the 1930s (Collins 1999:201). Decades of poor farming techniques and land mismanagement exacerbated by severe droughts culminated in extensive soil erosion and loss of fertility. In order to conserve the land and provide financial relief across the country, the Roosevelt Administration initiated various federal New Deal projects designed to stimulate the economy and restore America's natural resources (Collins 1999). The Soil Erosion Service, later the Soil Conservation Service, selected the upper Gila River in Arizona and New Mexico as a demonstration project to protect Coolidge Dam and the San Carlos Irrigation Project from filling with silt



(Collins 1999:201, 202). The demonstration area covered approximately 8.2 million acres, most of which were in Arizona. Two general measures were taken to correct the existing conditions: revegetation of the drainage areas and the construction of artificial water-control features such as checkdams and dikes (Collins 1999:222). The project began in December 1933 and employed 1,036 men from the Civil Works Administration and another thousand workers from the Federal Emergency Relief Act (Collins 1999:222). This labor force was insufficient to complete the project before the termination of the Civil Works Administration program in March 1934. The Soil Conservation Service then turned to the Civilian Conservation Corps (CCC) to fill the labor void and successfully secured labor under the Drought Relief Program from two camps in New Mexico and one in Arizona (Collins 1999:222). Approximately 200 Arizonans and Texans housed at the CCC camp near Duncan began work reseeding the range, building and repairing stock tanks, constructing rock and wire checkdams, strengthening stream embankments, and scooping water holes (Collins 1999:222). The Soil Conservation Service (SCS) later managed more CCC work camps in Arizona, in Pima, Santa Cruz, Maricopa, Yavapai, Apache, and Cochise Counties (Collins 1999:222, 223). In the San Pedro River Valley, an SCS-CCC work camp was established at St. David in southeastern Arizona, where CCC workers labored mostly on private ranches which were then maintained by the landowners (Collins 1999:223). Many of the features built by the Civil Works Administration, Federal Emergency Relief Act, and CCC workers are still present on the landscape today (Seymour 1998). Ranching remains an important economic activity throughout much of southeastern Arizona today.

## **SURVEY EXPECTATIONS**

Based on the previously identified archaeological sites in the vicinity of the project area and the depiction of several nearby historical features on historical maps, WestLand expected to identify archaeological sites and isolated occurrences related to the prehistoric and Historic period occupation of the area. Given the previous findings and the overall prehistoric and historical cultural trends of the Dragoon area, prehistoric sites discovered in the project area would likely be associated with the Mogollon, Hohokam, Dragoon, or other Native American cultures. With regard to Historic period sites, they would likely be associated with transportation networks, mining, and ranching activities from the late nineteenth and twentieth centuries.

A cultural resources inventory has both managerial and research objectives. On the management side is the need to identify and record the cultural resources present and then determine which of these possess the qualities that make them significant in local, state, or national history and eligible for inclusion in the National Register of Historic Places (NRHP). On the research side is the desire to understand human adaptation and use of the landscape. WestLand's survey design and field methods addressed both objectives. The goals of the current survey were to (1) relocate and re-assess the condition of any known archaeological sites in the project area; (2) discover and document previously unidentified archaeological sites and isolated cultural materials; and (3) evaluate the NRHP eligibility of the archaeological resources.

To accomplish these goals, the following specific research aims were established for the documentation of the archaeological resources:

1. Identify and document the archaeological resources in the project area.
2. Record basic descriptive and interpretive information for each archaeological resource on forms appropriately tailored to isolated artifacts, isolated features, and archaeological sites.
3. Based on prior knowledge of the area, ascertain as precisely as possible the cultural authorship and chronological age of each archaeological resource.
4. Map the location and extent of each archaeological resource identified.
5. Ascertain whether the resources are archaeological sites according to criteria defined by the ASM.
6. Evaluate whether or not the archaeological resources identified have the qualities necessary to be eligible for inclusion in the NRHP.

## SURVEY METHODS

WestLand archaeologists Anna King, Gaylen Tinsley, Adam Marshall, and Brian MacHardy conducted an intensive 100-percent-coverage non-collection archaeological survey of the project area in accordance with ASM and SHPO standards. For this project, the archaeologists walked parallel transects spaced no wider than 20 m (66 feet) apart to ensure that the project area was thoroughly examined for visible evidence of prehistoric and historical cultural features and artifacts. Field maps and a Trimble GeoXT Global Positioning System unit were used to ensure complete coverage. Field observations were recorded on standardized forms for later analysis. The archaeologists also reviewed historical maps prior to the field survey to identify Historic period features on the landscape that might still exist as archaeological sites. Ground cover at the time of the survey was very dense, with approximately 75 percent cover. Due to the limited ground visibility resulting from heavy vegetation, a concerted effort was made to closely examine the ground surface around areas of identified isolated occurrences to minimize the chances for sites to be inadvertently recorded as isolated occurrences. Close attention was also paid to open areas devoid of ground cover around animal burrows and ant hills.

The following ASM guidelines were applied to determine whether any of the archaeological resources in the project area should be designated and recorded as archaeological sites (ASM 1993, 1995):

1. Physical remains of past human activity that are at least 50 years old.

Additionally, sites should consist of at least one of the following:

2. 30+ artifacts of a single class (i.e., 30 sherds, 30 lithics, 30 tin cans) within an area 15 m (50 ft) in diameter, except when all pieces appear to originate from a single source (i.e., one ceramic pot, one core, one glass bottle).
3. 20+ artifacts which include at least 2 classes of artifact types (i.e., sherds, ground stone, nails, glass) within an area 15 m (50 ft) in diameter.
4. One or more archaeological features in temporal association with any number of artifacts.
5. Two or more temporally associated archaeological features without artifacts.

Archaeological finds that do not meet the ASM site criteria are classified and recorded as isolated occurrences.

Should cultural resources be identified, an assessment of their eligibility for inclusion in the NRHP is conducted. The significance of cultural resources is evaluated according to the implementing regulations of Section 106 of the National Historic Preservation Act. Federal regulation 36 CFR 60.4 defines the criteria for determining whether or not cultural resources have significance in American history. (See the *National Register of Historic Places* section of this report for additional discussion.)

This final report includes the results of the site files/records search and field investigation, and has been prepared in accordance with the reporting standards developed by the SHPO and the ASM, and with the standards specified in Arizona Board of Regents Rules, Chapter 8, Section 200 *et seq.*

## SURVEY FINDINGS

WestLand's cultural resources inventory resulted in the identification 22 isolated occurrences of cultural materials (*Figure 4*).

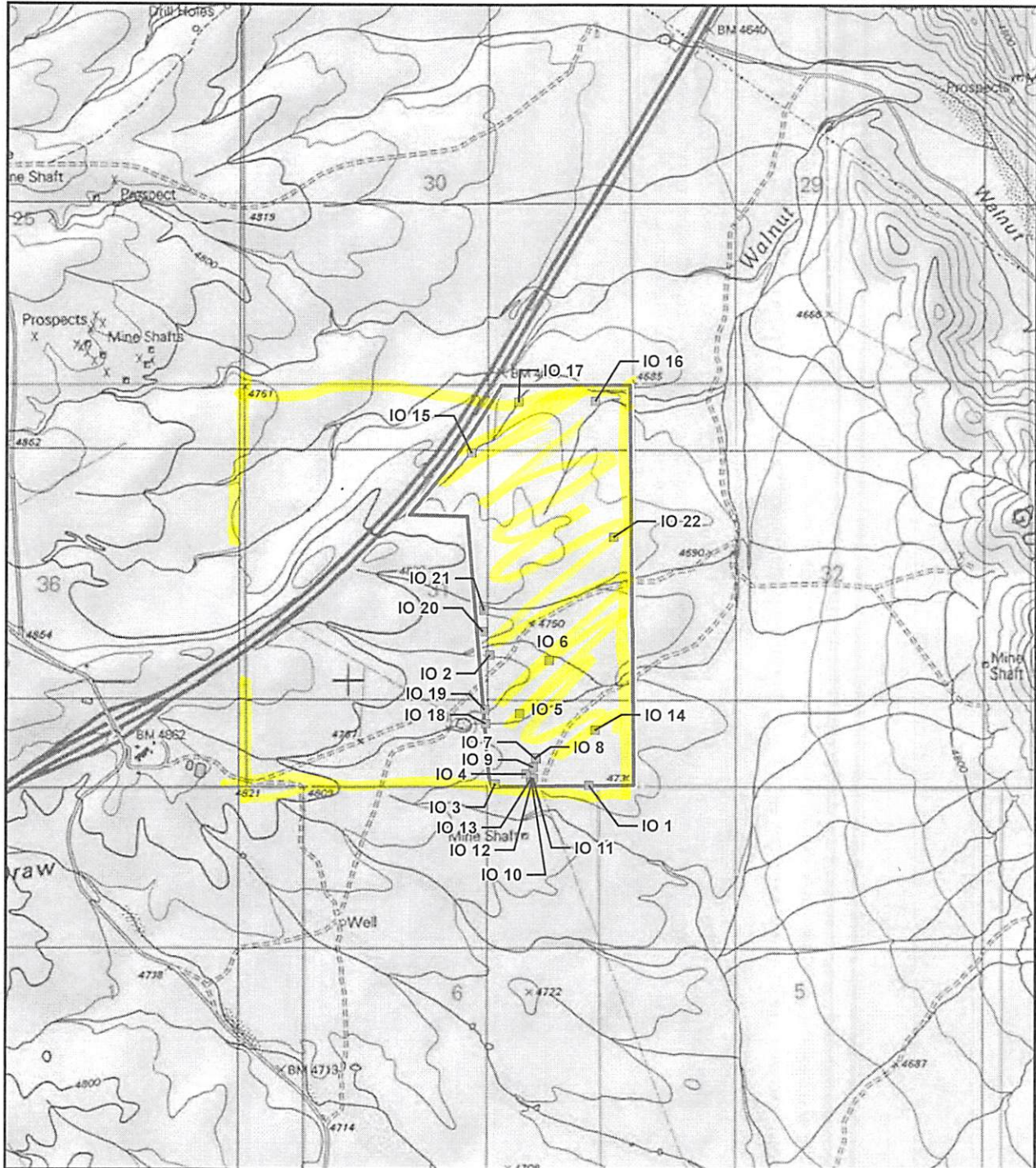
### ISOLATED FINDS

Twenty-two isolated occurrences were identified within the project area. These represent prehistoric Native American and Historic to Modern period Euroamerican activities in the area. Only one isolate is prehistoric, a unifacial core tool. This item represents expedient tool manufacture and was used during resource-procurement and processing forays away from the habitation sites in the vicinity. The Euroamerican isolates are features largely related to mining, ranching, and erosion-control activities. While the mining-related isolates (i.e., the prospect pits and cairns) lack temporally diagnostic characteristics, they are presumed to be related to work at the adjacent Legal Tender Claim, which took place circa the 1910s–1960s. The ranching-related feature (i.e., the stock tank) is of unknown age, but may be attributed to the Late Historic or Modern period. The erosion-control features (i.e., the checkdams and rock alignments) could be associated with the work of the Soil Conservation Service and the Civilian Conservation Corps during the 1930s; however, all appear to have been expediently and informally constructed (as compared to the more formal, robust Civilian Conservation Corps features found in the Dragoon area—see Prasciunas 2010; 2011) and are more likely related to local ranching operations of the Late Historic to Modern period. The isolated occurrences are detailed in *Table 3* below and are depicted on *Figure 4*.

### RESEARCH SYNTHESIS

WestLand's cultural resources inventory resulted in the identification of 22 isolated occurrences of cultural materials (*see Figure 4*). The isolated occurrences are predominantly Euroamerican features although one prehistoric flaked stone item was identified. The Historic period isolates are related to mining, ranching, and erosion control during the early to mid-twentieth century, although several possibly modern features were noted.

WestLand expected to identify archaeological materials related to the prehistoric and Historic period occupation of the area. Given the previous findings and the overall prehistoric and historical cultural trends of the Dragoon area, these cultural resources were anticipated to be related to Hohokam, Mogollon, Dragoon, and other Native American cultures or associated with Historic period transportation networks, mining, and ranching activities from the late nineteenth and twentieth centuries. Overall, WestLand's expectations were met by the survey findings.



T15S, R23E, Portion of Section 31,  
Cochise County, Arizona  
Dragoon USGS 7.5' Quadrangle  
Projection: UTM NAD83, Zone 12  
Data Source: ArcGIS Online

WestLand Resources, Inc.  
Tucson • Phoenix • Flagstaff  
4001 E. Paradise Falls Drive  
Tucson, Arizona 85712 (520) 204-9585

0 1,000 2,000  
Feet

0 500 1,000  
Meters



### Legend

- Project Area
- Isolated Occurrence

Figure 4. Isolated occurrences in the project area



Table 3. Isolated occurrences identified within the project area



Isolate No.	Field No.	Land Status	Age	Type	Subtype	Dimensions (L × W × H or D in ft unless otherwise specified)	Notes
1	3	Private	Historic	Feature	Cairn	3 × 2 × 1	Stacked rock cairn with fallen 2 × 4in wooden post
2	38	Private	Historic	Feature	Cairn	3 × 3 × 1	Stacked rock cairn. No wooden post.
3	39	Private	Historic	Feature	Prospect pit	12 × 5 × 2	Shallow prospect into cobble-rich alluvium with waste materials to E and W
4	40	Private	Historic/ Modern?	Feature	Stock tank with berm	Berm: 143 × 10 × 4	Earthen stock tank excavated into small drainage with large berm to north, east, and south. 50-gallon drum converted to feeding trough located nearby.
5	41	Private	Historic/ Modern?	Feature	Trash dump	10 × 10	Brick dump. ~25 fired adobe bricks (each 12 × 6 × 4in) with a few fragments of galvanized metal and wood.
6	42	Private	Historic/ Modern?	Feature	Erosion-control feature/checkdam	284 × 1 × 1	Stacked rock erosion-control feature across and along bank of small drainage ( <i>Photo 2</i> ). Locally available cobbles, asphalt, and concrete chunks used in construction. One course of cobbles at southeastern end and three courses in the drainage. Checkdam has been breached by downcutting drainage.
				 <p>Photo 2. IO 6, a breached erosion-control feature across a downcutting drainage, looking southeast</p>			
7	43	Private	Historic	Feature	Prospect pit	8 × 8 × 2	Shallow prospect into cobble-rich alluvium with waste materials to E and W
8	44	Private	Historic	Feature	Prospect pit	8 × 8 × 2	Shallow prospect into cobble-rich alluvium with waste materials to E and W ( <i>Photo 3</i> )
				 <p>Photo 3. IO 8, a prospect pit excavated into the rocky alluvium, facing west</p>			



Table 3. Isolated occurrences identified within the project area

Isolate No.	Field No.	Land Status	Age	Type	Subtype	Dimensions (L × W × H or D in ft unless otherwise specified)	Notes
9	45	Private	Historic	Feature	Cairn	3.5 × 3.5 × 1	Stacked rock cairn with fallen 2-in-diam × 4-ft metal post and wooden lathe
10	46	Private	Historic/ Modern?	Feature	Erosion-control feature/checkdam	3 × 3 × 0.5	Small erosion-control feature across downcutting rill. One course of locally available cobbles. Feature is breached and cobbles north of rill are missing. Southeast (and downstream) of stock tank IO 15.
11	47	Private	Historic/ Modern?	Feature	Erosion-control feature/checkdam	8 × 2 × 0.5	Small erosion-control feature across downcutting drainage. One course of locally available cobbles. Feature is breached. Southeast (and downstream) of stock tank IO 15.
12	48	Private	Historic/ Modern?	Feature	Erosion-control feature/checkdam	12.5 × 2 × 1	Erosion-control feature across downcutting drainage. Three courses of locally available cobbles. Feature is breached. Southeast (and downstream) of stock tank IO 15.
13	49	Private	Historic/ Modern?	Feature	Erosion-control feature/checkdam	21 × 2 × 2	Erosion-control feature across downcutting drainage. Three courses of locally available cobbles. Feature is partially breached. Southeast (and downstream) of stock tank IO 15.
14	50	Private	Historic	Feature	Cairn	4 × 3 × 1	Stacked rock cairn, no post
15	51	Private	Historic/ Modern?	Feature	Erosion-control feature/checkdam	164 × 2 × 1	Large erosion-control feature across downcutting drainage. Four courses of locally available cobbles at northern end, across drainage. One course of local cobbles, asphalt, and concrete chunks at southeastern end along drainage bank. Feature is breached at the drainage. A steel-sided, aluminum-top beverage can with pull tab opening (ca. 1960s [Busch 1981; Maxwell 1993]) is found near the feature.
16	52	Private	Historic/ Modern?	Feature	Erosion-control feature/checkdam	66 × 1.5 × 1	Erosion-control feature across downcutting drainage. Five courses of locally available cobbles at N end, across drainage. One course of local cobbles, asphalt, and concrete chunks at S end. Feature is breached at the drainage.
17	53	Private	Historic/ Modern?	Feature	Erosion-control feature/checkdam	193 × 2 × 1	Large erosion-control feature across downcutting drainage. Seven courses of locally available cobbles at northern end, across drainage. One course of local cobbles, asphalt, and concrete chunks at southeastern end along drainage bank. Feature is breached at the drainage. A steel-sided, aluminum-top beverage can with pull tab opening (ca. 1960s [Busch 1981; Maxwell 1993]) is found near the feature.
18	54	Private	Prehistoric	Artifact	Core tool	–	Gray-green rhyolite cortical unifacial core tool or "chopper"
19	55	Private	Historic	Feature	Cairn	3 × 2 × 1	Collapsed rock cairn, no post
20	56	Private	Historic	Feature	Prospect pit	10 × 8 × 2	Shallow prospect into cobble-rich alluvium with waste materials to north, east, and southwest. An associated cairn is located to the northwest. A set of car seat springs was found in the base of the prospect.
21	57	Private	Historic	Feature	Cairn	4 × 4 × 0.5	Stacked rock cairn, no post
22	58	Private	Historic	Feature	Prospect pit	8 × 8 × 2	Shallow prospect into cobble-rich alluvium with waste materials on all sides. An associated cairn is located to the northeast.

## NATIONAL REGISTER OF HISTORIC PLACES

The significance of cultural resources is evaluated according to the implementing regulations of Section 106 of the National Historic Preservation Act. Federal regulation 36 CFR 60.4 defines the criteria for determining whether or not cultural resources have significance in American history.

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

- (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) that are associated with the lives of persons significant in our past; or
- (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) that have yielded, or may be likely to yield, information important in prehistory and history.

The criteria for determining the significance of cultural resources in Arizona state history are identical to the national criteria with the exception that it is the “quality of significance in *Arizona* history” (ASM 1995).

## HISTORIC CONTEXT

A historic context is the analytic framework within which a cultural property’s importance can be understood. The dimensions of time, place, and research theme converge to create the historic contexts relevant for evaluating the significance of cultural properties in a specific area. The National Park Service (NPS) (Hardesty and Little 2000:18; National Park Service 1996) has provided a thematic framework for history and prehistory to reflect current scholarship and to represent the full diversity of America’s past. The themes and topics of the current NPS thematic framework are:

**I. Peopling Places:** The statistical study of human population, family, and the life cycle; dynamics such as growth and decline; aggregation and dispersion; migration from outside and within; community; encounters, conflict, and colonization; abandonment; ethnicity, ethnic homelands and cultural identity; and quality of life including health, nutrition, and disease.

**II. Creating Social Institutions and Movements:** Study of the manners by which people develop groups or organizations within a society and how these are organized including identification of the groups, physical manifestations of the social structures within an individual site and across the landscape, recreational activities, social ranking at the level of the individual and groups, alliance and interaction, effect of cosmology (religion) on the organizational structures, mortuary practice, and symbolic communication.

**III. Expressing Cultural Values:** Study of educational intellectual currents; visual and performing arts; literature, mass media, architecture, landscape architecture, and urban design; and popular and traditional cultures.

**IV. Shaping the Political Landscape:** Study of the development and impact of social institutions such as governmental institutions; political ideas, cultures, and theories; military institutions and activities as well as parties, protests, and movements.

**V. Developing the American Economy:** Study of how society transfers services and materials between individuals and communities, how resources and goods are extracted, produced, distributed, and consumed among the society; transportation and communication including trends related to travel and the transference of information within a society and between societies such as the information that is being conveyed, the mechanisms for transferring the information, and the nature of the communication; workers and work culture; labor organizations and protests; exchange and trade; governmental policies and practices; and economic theory.

**VI. Expanding Science and Technology:** Study of experimentation and invention; technological applications; scientific thought and theory, and its effects on lifestyle and health.

**VII. Transforming the Environment:** Generally defined as the study of human techniques and processes of manipulating the natural environment and its resources such as water and soil control, resource management, modifications of the natural landscape, resource identification and procurement, food preservation and storage, architectural design and construction, and production of tools and implements. Also includes adverse consequences and stresses on the environment and protecting and preserving the environment.

**VIII. Changing Role of the United States in the World Community:** Study of international relations; commerce; expansionism and imperialism; and immigration and emigration policies.

The specific historic contexts necessary for evaluating the quality of significance of the cultural properties discovered in the project area are created by considering the thematic framework presented above with regard to the prehistory and history of the project area as presented in the *Culture History for Southeastern Arizona*. This convergence of local archaeological history and the NPS thematic framework creates the necessary historic contexts for evaluating the significance of the individual sites.

The archaeological resources identified in the present survey are grouped under defined historic contexts relevant to these resources. By relevant, WestLand means that the historic context is appropriate to the time, place, location, cultural authorship, and prevailing themes of archaeological and historical research.

The following discussion groups each of the cultural properties, evaluates them against the developed historic contexts, provides eligibility recommendations, and states the recommended treatment for each prior to the implementation of the project. Specific information about each archaeological resource identified in the project area is included in *Appendix A*. This information includes the survey field

number for the isolated occurrences; UTM coordinates (NAD83) for the location of each resource; land jurisdiction; cultural affiliation and property type; age; and whether or not the resource is eligible for inclusion in the NRHP. *Appendix A* includes sensitive information that may be protected from public disclosure by Arizona state law, federal law, or both (for example: A.R.S. §39-125 and National Historic Preservation Act Section 304).

## **PREHISTORIC OCCUPATION OF THE DRAGOON AREA**

### **National Register of Historic Places Eligibility Evaluations**

- **Isolated Occurrences:** IO 18 is a prehistoric flaked stone item that represents expedient tool use, possibly for resource-procurement activities in the Dragoon area. This isolate is not considered significant under the NRHP guidelines and is recommended ineligible for inclusion in the NRHP.

## **HISTORIC-MODERN OCCUPATION OF THE DRAGOON AREA**

### **National Register of Historic Places Eligibility Evaluations**

- **Isolated Occurrences:** The remaining 21 isolated occurrences represent Historic period mining, ranching, and erosion-control activities in the Dragoon area during the early to mid-twentieth century. None of the isolates of themselves can be considered significant under the NRHP guidelines and all are recommended ineligible for inclusion in the NRHP.

### **Assessment of Effect and Recommended Treatment**

The 22 isolated occurrences are recommended ineligible for inclusion in the NRHP. WestLand recommends that these resources require no further archaeological work.

## **MANAGEMENT SUMMARY**

Darling Geomatics contracted with WestLand to conduct a cultural resources inventory of approximately 256 acres of private property prior to planned mineral exploration activities. WestLand's cultural resources inventory resulted in the identification of 22 isolated occurrences of cultural materials.

WestLand recommends that the 22 isolated occurrences are ineligible for inclusion in the NRHP because they lack significance. No further archaeological work is recommended for these resources. WestLand provides the general recommendation that all ground-disturbing activities have the potential to unearth human remains. On private lands in the state of Arizona, such discoveries must be treated in accordance with Arizona Revised Statute §41-865.

## REFERENCES

Abbott, David R. (ed.)

2003 *Centuries of Decline during the Hohokam Classic Period at Pueblo Grande*. University of Arizona Press, Tucson.

Ackerly, Neal W.

1982 Irrigation, Water Allocation Strategies, and the Hohokam Collapse. *Kiva* 47:91–106.

Altschul, Jeffrey H.

1994 *From North to South: Shifting Sociopolitical Alliances during the Formative Period in the San Pedro Valley*. Paper presented at the Spring meeting of the Arizona Archaeological Council, April 8 and 9, Tucson.

Andrews, John P., and Todd W. Bostwick

1997 *Desert Farmers at the River's Edge: The Hohokam and Pueblo Grande*. Pueblo Grande Museum and Archaeological Park, Phoenix.

Arizona State Museum (ASM)

1993 *Archaeological Site Recording Manual, Version 1.1*. Arizona State Museum, University of Arizona, Tucson.

1995 *Revised Site Definition Policy*. Arizona State Museum, University of Arizona, Tucson.

Ayres, James E.

1970 Two Clovis Fluted Points from Southern Arizona. *The Kiva* 35:121–124.

Bowen, Thomas

1972 *A Survey and Re-evaluation of the Trincheras Culture, Sonora, Mexico*. Manuscript on file. Arizona State Museum Library Archives, AT-95-85. University of Arizona, Tucson.

1976 Esquema de la Historia de la Cultura Trincheras. In *Sonora: Antropología del Desierto*, edited by B. Braniff C. and R. S. Felger, pp. 267–279. Colección Científica 27. Instituto Nacional de Antropología e Historia, Culhuacan, Mexico.

Brown, David E. (ed.)

1994 *Biotic Communities of the American Southwest*. University of Arizona Press, Tucson.

Busch, Jane

1981 Introduction to the Tin Can. *Historical Archaeology* 15(1):95–104.

Cable, John S., and David E. Doyel

1987 Pioneer Period Village Structure and Settlement Patterns in the Phoenix Basin. In *The Hohokam Village: Site Structure and Organization*, edited by David Doyel, pp. 21–70. Southwestern and Rocky Mountain Division, American Association for the Advancement of Science, Glenwood Springs.

Carlson, David, Jeanne Swarthout, and Stan Freer

- 1989 Lithic Technology along the All American Pipeline. In *Cultural Resources Report for the All American Pipeline Project*, pp. 647–678. New Mexico State University, Las Cruces.

Ciolek-Torrello, Richard

- 1998 Sites of the Early Formative Period. In *Early Farmers of the Sonoran Desert, Archaeological Investigations at the Houghton Road Site, Tucson, Arizona*, edited by Richard Ciolek-Torrello, pp. 229–256. Technical Series No. 72. Statistical Research, Inc., Tucson.

Collins, William S.

- 1999 *The New Deal in Arizona*. Arizona State Parks Board, Phoenix.

Cooper, John R., and Leon T. Silver

- 1964 *Geology and Ore Deposits of the Dragoon Quadrangle, Cochise County, Arizona*. Professional Paper 416. U.S. Geological Survey, Washington D.C.

Dean, Jeffery S.

- 1991 Thoughts on Hohokam Chronology. In *Exploring the Hohokam. Prehistoric Desert Peoples of the American Southwest*, edited by G. J. Gumerman, pp. 61–149. Amerind Foundation New World Studies Series No. 1. University of New Mexico Press, Albuquerque.

Deaver, William L.

- 1989a Ceramics. In *Excavations at Hawk's Nest (AZ AA:12:484), A Late Pioneer–Early Colonial Period Hohokam Farmstead, Part 1 of Hohokam Archaeology along Phase B of the Tucson Aqueduct, Central Arizona Project, Vol. 4: Small Sites and Specialized Reports*, edited by Jon S. Czaplicki and John C. Ravesloot, pp. 51–62.

- 1989b Pottery and Other Ceramic Artifacts. In *The 1979–1983 Testing at Los Morteros (AZ AA:12:57 ASM), a Large Hohokam Village Site in the Tucson Basin*, by Richard C. Lange and William L. Deaver, pp. 27–82. Archaeological Series No. 177. Arizona State Museum, University of Arizona, Tucson.

- 1998 The Chronology of the Houghton Road Site and the Early Formative Period in the Tucson Basin. In *Early Farmers of the Sonoran Desert, Archaeological Investigations at the Houghton Road Site, Tucson, Arizona*, edited by Richard Ciolek-Torrello, pp. 189–208. Technical Series No. 72. Statistical Research, Inc., Tucson.

Deaver, William L., and Richard Ciolek-Torrello

- 1995 Early Formative Period Chronology for the Tucson Basin. *The Kiva* 60(4):481–530.

Deaver, William L., and Carla Van West

- 2001 Introduction. In *El Macayo: A Prehistoric Settlement in the Upper Santa Cruz River Valley*, edited by William L. Deaver and Carla Van West, pp. 1–26. Technical Series 74. Statistical Research, Inc., Tucson.



Debowski, Sharon S., Anique George, Richard Goddard, and Deborah Mullon

1976 *An Archaeological Survey of the Buttes Dam Reservoir*. Archaeological Series No. 93. Arizona State Museum, University of Arizona, Tucson.

Diehl, Michael W. (ed.)

2005 *Subsistence and Resource Use Strategies of Early Agricultural Communities in Southern Arizona*. Anthropological Papers No. 34. Center for Desert Archaeology, Tucson.

DiPeso, Charles C.

1956 *The Upper Pima of San Cayetano del Tumacacori: An Archaeohistorical Reconstruction of the O'otam of Pimería Alta*. Publication No. 7. Amerind Foundation, Dragoon.

1974 *Casas Grandes, a Fallen Trading Center of the Gran Chichimeca*, Vols. 1–3, edited by Gloria J. Fenner. Amerind Foundation Series No. 9. Amerind Foundation, Dragoon, and Northland Press, Flagstaff.

1979 Prehistory: The O'otam. In *Southwest*, edited by A. Ortiz, pp. 91–99. Handbook of North American Indians, Vol. 9, W. C. Sturtevant, general editor. Smithsonian Institution, Washington D.C.

Doelle, William H., and Henry D. Wallace

1984 The Tucson Basin during the Protohistoric Period. *Kiva* 49(3–4):195–211.

1990 The Transition to History in Pimería Alta. In *Perspectives on Southwestern Prehistory*, edited by P. E. Minnis and C. L. Redman, pp. 239–257. Westview Press, Boulder.

Doelle, William H., Frederick Huntington, and Henry Wallace

1987 Rincon Phase Reorganization in the Tucson Basin. In *Hohokam Village: Site Structure and Organization*, edited by David E. Doyel, pp. 71–95. Southwestern Rocky Mountain Division of the American Association for the Advancement of Science, Glenwood Springs.

Doyel, David E.

1995 Comments. *The Kiva* 60:641–650.

Elson, Mark, and Michael Lindeman

1994 The Eagle Ridge Site, AZ V:5:104/1045 (ASM/TNF). In *The Roosevelt Community Development Study: Introduction and Small Sites*, edited by Mark D. Elson and Deborah L. Swartz, pp. 23–116. Anthropological Papers No. 13, Vol. 1. Center for Desert Archaeology, Tucson.

Faught, Michael K., and Andrea K. L. Freeman

1998 Paleoindian Complexes of the Terminal Wisconsin and Early Holocene. In *Paleoindian and Archaic Sites in Arizona*, edited by Jonathan B. Mabry. Technical Report 97-7. Center for Desert Archaeology, Tucson.

Ferg, Alan, Kenneth C. Rozen, William L. Deaver, Martyn D. Tagg, David A. Phillips III, and David A. Gregory

- 1984 *Hohokam Habitation Sites in the Northern Santa Rita Mountains*. Archaeological Series 147(2). Arizona State Museum, University of Arizona, Tucson.

Freeman, Andrea

- 1999 Status of the Middle Archaic in Southern Arizona. In *Excavation in the Santa Cruz River Floodplain: The Middle Archaic Component at Los Pozos*. Anthropological Papers No. 20. Center for Desert Archaeology, Tucson.

Fulton, William S.

- 1934 *Archaeological Notes on Texas Canyon, Arizona*. Heye Foundation Contributions Vol. 12, Nos. 1 and 2. Museum of the American Indian, New York.

Fulton, William S., and Carr Tuthill

- 1940 *An Archaeological Site near Gleeson, Arizona*. Amerind Foundation, Inc., Dragoon.

Gilman, Patricia A.

- 1995 Multiple Dimensions of the Archaic-to-Pit Structure Period Transition in Southeastern Arizona. *The Kiva* 60:619–632.

Gilpin, Dennis, and David A. Phillips, Jr.

- 1998 *The Prehistoric to Historic Transition Period in Arizona, circa A.D. 1519 to 1692*. Archaeological Report No. 97-4. SWCA, Flagstaff.

Gladwin, Harold S.

- 1965 *Excavations at Snaketown: Material Culture*. University of Arizona Press, Tucson.

Gladwin, Harold S., Emil W. Haury, E. B. Sayles, and Nora Gladwin

- 1937 *Excavations at Snaketown: Material Culture*. Medallion Papers No. 25. Gila Pueblo, Globe.

Goodwin, Grenville

- 1937 The Characteristics and Function of Clan in a Southern Athapaskan Culture. *American Anthropologist* 39:394–407.

- 1942 *The Social Organization of the Western Apache*. University of Chicago Press, Chicago.

Goodwin, Grenville, and Keith Basso

- 1971 *Western Apache Raiding and Warfare*. University of Arizona Press, Tucson.

Greenleaf, J. Cameron

- 1975 *Excavations at Punta de Agua*. Anthropological Papers No. 26. University of Arizona Press, Tucson.

Gregory, David A.

- 1991 Form and Variation in Hohokam Settlement Patterns. In *Chaco and Hohokam: Prehistoric Regional Systems in the American Southwest*, edited by Patricia L. Crown and W. James Judge, pp. 135–157. School of American Research Press, Santa Fe.

- 2001 *Excavations in the Santa Cruz River Floodplain: The Early Agricultural Period Component at Los Pozos*. Anthropological Papers No. 21. Center for Desert Archaeology, Tucson.

Halbirt, Carl D., and T. Kathleen Henderson (eds.)

- 1993 *Archaic Occupation on the Santa Cruz Flats: The Tator Hills Archaeological Project*. Northland Research, Inc., Flagstaff.

Hardesty, Donald L., and Barbara J. Little

- 2000 *Assessing Site Significance: A Guide for Archaeologists and Historians*. Altamira Press, Lanham.

Haury, Emil W.

- 1957 An Alluvial Site on the San Carlos Indian Reservation, Arizona. *American Antiquity* 23:2–27.
- 1975 *The Stratigraphy and Archaeology of Ventana Cave* (second printing). University of Arizona Press, Tucson.
- 1976 *The Hohokam: Desert Farmers and Craftsmen*. University of Arizona Press, Tucson.
- 1978 Concluding Thoughts. In *The Hodges Ruin: A Hohokam Community in the Tucson Basin*, by Isabel T. Kelly, pp. 126–128. Anthropological Papers No. 30. University of Arizona Press, Tucson.
- 1986 An Alluvial Site on the San Carlos Indian Reservation, Arizona. Reprinted. In *Emil W. Haury's Prehistory of the Southwest*, edited by J. Jefferson Reid and David E. Doyel, pp. 1–133. University of Arizona Press, Tucson.

Hayden, Julian D.

- 1970 Of Hohokam Origins and Other Matters. *American Antiquity* 34:87–94.

Heckman, Robert A.

- 2000 The Dagoon Tradition. In *Prehistoric Painted Pottery of Southeastern Arizona*, by Robert A. Heckman, Barbara K. Montgomery, and Stephanie M. Whittlesey, pp. 43–63. Technical Series No. 77. Statistical Research, Inc., Tucson.

Heidke, James M.

- 2005 Early Agricultural Period Pottery from Las Capas and Los Pozos. In *Material Cultures and Lifeways of Early Agricultural Communities in Southern Arizona*, edited by R. Jane Sliva, pp. 171–206. Anthropological Papers No. 35. Center for Desert Archaeology, Tucson.

Henderson, T. Kathleen

- 2002 Chronology. In *The Grewe Archaeological Research Project, Volume 1: Project Background and Feature Descriptions*, edited by Douglas B. Craig, pp. 163–208. Anthropological Papers No. 99-1. Northland Research, Inc., Flagstaff and Tempe.

Huckell, Bruce B.

- 1984 The Paleo-Indian and Archaic Occupation of the Tucson Basin: Overview. *The Kiva* 49:133–145.
- 1996 The Archaic Prehistory of the North American Southwest. *Journal of World Prehistory* 10:305–372.

Johnson, Alfred E.

- 1960 *The Place of the Trincheras Culture of Northern Sonora in Southwestern Archaeology*. Unpublished master's thesis. Department of Anthropology, University of Arizona, Tucson.

Lindeman, Michael W., and Gregory J. Whitney

- 2005 *The Resolution Project: Results of an Archaeological Survey in Pinal County, Arizona*. Technical Report 2003-10. Desert Archaeology, Inc., Tucson.

Mabry, Jonathan B.

- 1998 *Paleoindian and Archaic Sites in Arizona*. Technical Report 97-7. Center for Desert Archaeology, Tucson.

Mabry, Jonathan B., and Michael K. Faught

- 1998 Archaic Complexes of the Early Holocene. In *Paleoindian and Archaic Sites in Arizona*, edited by Jonathan B. Mabry. Technical Report 97-7. Center for Desert Archaeology, Tucson.
- 2005 Diversity in Early Southwestern Farming and Optimization Models of Transition to Agriculture. In *Subsistence and Resource Use Strategies of Early Agricultural Communities in Southern Arizona*, edited by Michael Diehl. Anthropological Papers No. 34. Center for Desert Archaeology, Tucson.

Masse, W. Bruce

- 1980 Introduction to the Peppersauce Wash Project. In *The Peppersauce Wash Project: Excavations at Three Multicomponent Sites in the Lower San Pedro Valley, Arizona*. Contributions to Highway Salvage Archaeology in Arizona 53: Appendix F. Arizona State Museum, University of Arizona, Tucson.
- 1981 A Reappraisal of the Protohistoric Sobaipuri Indians of Southeastern Arizona. In *The Protohistoric Period in the North American Southwest, A.D. 1450–1700*, edited by David R. Wilcox and W. Bruce Masse, pp. 28–56. Anthropological Research Papers No. 24. Arizona State University, Tempe.

Maxwell, D. B. S.

- 1993 Beer Cans: A Guide for the Archaeologist. *Historical Archaeology* 27(1):95–113.

McGuire, Randall H., and María Elisa Villalpando C.

1993 *An Archaeological Survey of the Altar Valley, Sonora, Mexico*. Archaeological Series No. 184. Arizona State Museum, University of Arizona, Tucson.

Merrill, William L., Robert J. Hard, Jonathan Mabry, Gayle T. Fritz, Karen R. Adams, John R. Roney, and A. C. MacWilliams

2009 The Diffusion of Maize to the Southwestern United States and its Impact. *Proceedings of the National Academy of Sciences of the United States of America* 106(50):21019–21026.

Morrissey, Richard J.

1950 The Early Range Cattle Industry in Arizona. *Agricultural History* 24(2):151–156.

Myrick, David F.

1975 *Railroads of Arizona: Volume 1, the Southern Roads*. Howell-North Books, Berkeley.

National Park Service

1996 Revised Thematic Framework. National Park Service, Washington D.C.

Neily, Robert B.

1985 *The Snowflake-Redonda Project: An Intensive Archaeological Survey in the Upper Little Colorado River Area of East-Central Arizona*. Cultural Resource Management Division, Arizona State Museum, University of Arizona, Tucson.

Prasciunas, Mary M.

2010 *A Cultural Resources Inventory of 40 Station Locations near Dragoon, Arizona*. Cultural Resources Report No. 2010-32. WestLand Resources, Inc., Tucson.

2011 *A Cultural Resources Inventory of Six Exploration Drill Holes and Access Roads for the Dragoon Project, Cochise County, Arizona*. Cultural Resources Report No. 2011-20. WestLand Resources, Inc., Tucson.

Reid, Jefferson, and Stephanie Whittlesey

1997 *The Archaeology of Ancient Arizona*. University of Arizona Press, Tucson.

Roth, Barbara J.

1996 *Early Formative Adaptations in the Southern Southwest*, edited by Barbara J. Roth. Monographs in World Archaeology No. 5. Prehistory Press, Madison.

Sayles, E. B.

1945 *The San Simon Branch, Excavations at Cave Creek in the San Simon Valley: Volume 1. Material Culture*. Medallion Papers No. 34. Gila Pueblo, Globe.

1983 *The Cochise Cultural Sequence in Southeastern Arizona*. Anthropological Papers of the University of Arizona No. 42. University of Arizona Press, Tucson.

Sayles, E. B., and Ernst Antevs

1941 *The Cochise Culture*. Lancaster Press, Inc., Lancaster.

Schroeder, Albert H.

1957 The Hakataya Cultural Tradition. *American Antiquity* 23:176–178.

Seymour, Gregory R.

1998 The Civilian Conservation Corps in Arizona: A Context for Erosion-control Features. *Kiva* 63(4):359–377.

Seymour, Gregory R., Richard V. N. Ahlstrom, and David P. Doak

1997 *The Sanchez Copper Project. Volume 1: Archaeological Investigations in the Safford Valley, Graham County, Arizona*. Archaeological Report No. 94-82. SWCA Inc., Tucson.

Slaughter, Mark C.

1992 Flaked Stone in Arizona. In *Making and Using Stone Artifacts: A Context for Evaluating Lithic Sites in Arizona*, by Mark C. Slaughter, Lee Fratt, Kirk Anderson, and Richard V. N. Ahlstrom, pp. 2.1–2.12. Prepared by SWCA, Tucson. Distributed by the Arizona State Historic Preservation Office, Phoenix.

Spicer, Edward H.

1962 *Cycles of Conquest: The Impact of Spain, Mexico, and the United States on the Indians of the Southwest, 1533–1960*. University of Arizona Press, Tucson.

Stephen, David V. M.

2010 *Archaeological Survey of the Thing View Project near Dragoon, Cochise County, Arizona*. Cultural Resources Report No. 101981. Professional Archaeological Services and Technologies, Inc., Tucson.

Stevens, Michelle N., and R. Jane Sliva

2002 Empire Points: An Addition to the San Pedro Phase Lithic Assemblage. *Kiva* 67(3):297–326.

Stein, Pat H.

1990 *Homesteading in Arizona, 1862 to 1940: A Guide to Studying, Evaluating, and Preserving Historic Homesteads*. Arizona State Parks Historic Context. Arizona State Historic Preservation Office, Phoenix.

1994 *Historic Trails in Arizona from Coronado to 1940*. A Component of the Arizona Historic Preservation Plan. SWCA, Flagstaff.

Stinson, Susan L.

2005 Early Agricultural Period Pottery from Las Capas and Los Pozos. In *Material Cultures and Lifeways of Early Agricultural Communities in Southern Arizona*, edited by R. Jane Sliva, pp. 207–216. Anthropological Papers No. 35. Center for Desert Archaeology, Tucson.

Sweeney, Edwin R.

1991 *Cochise Chiricahua Apache Chief*. University of Oklahoma Press, Norman.

Teague, Lynn S.

1993 Prehistory and the Traditions of the O'odham and Hopi. *Kiva* 58(4):435–454.

Trimble, Marshall

1986 *Roadside History of Arizona*. Mountain Press Publishing Company, Missoula.

Tuthill, Carr

1947 *The Tres Alamos Site on the San Pedro River, Southeastern Arizona*. The Amerind Foundation No. 4. Amerind Foundation, Dagoon.

United States Geological Survey, Mineral Resource Data System (USGS MRDS)

2014 *Legal Tender Prospect, Deposit ID 10039390*. Electronic Document. Available from [http://mrdata.usgs.gov/mrds/show-mrds.php?dep\\_id=10039390](http://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10039390). Accessed on 3 October 2014.

Vanderpot, Rein, and Jeffrey H. Altschul

2007 The Mescal Wash Site: A Persistent Place in Southeastern Arizona. In *Hinterlands and Regional Dynamics in the Ancient Southwest*, edited by Alan P. Sullivan and James M. Bayman, pp. 50–108. University of Arizona Press, Tucson.

Walker, Henry P., and Don Bufkin

1979 *Historical Atlas of Arizona*. University of Oklahoma Press, Norman.

Wallace, Henry D.

1986 *Rincon Phase Decorated Ceramics in the Tucson Basin: A Focus on the Westbranch Site*. Anthropological Papers No. 1. Institute for American Research, Tucson.

1988 Ceramic Boundaries and Interregional Interaction: New Perspectives on the Tucson Basin Hohokam. In *Recent Research on Tucson Basin Prehistory: Proceedings of the Second Tucson Basin Conference*, edited by William H. Doelle and Paul R. Fish, pp. 313–348. Anthropological Papers No. 10. Institute for American Research, Tucson.

Wallace, Henry D., and James P. Holmlund

1984 *The Classic Period in the Tucson Basin*. On file. Arizona State Museum Library, Tucson.

Wallace, Henry D., James M. Heidke, and William H. Doelle

1995 Hohokam Origins. *Kiva* 60(4):575–618.

Whittlesey, Stephanie M.

2003 *Rivers of Rock: Stories from a Stone-dry Land: Central Arizona Project Archaeology*. SRI Press, Tucson.



Whittlesey, Stephanie M., and R. Ciolek-Torrello

- 1996 The Archaic-Formative Transition in the Tucson Basin. In *Early Formative Adaptations in the Southern Southwest*, edited by Barbara J. Roth, pp. 49–64. Monographs in World Archaeology No. 5. Prehistory Press, Madison.

Whittlesey, Stephanie M., and Robert A. Heckman

- 2000 Cultural History and Research Background. In *Prehistoric Painted Pottery of Southeastern Arizona* by Robert A. Heckman, Barbara K. Montgomery, and Stephanie M. Whittlesey, pp. 1–22. Technical Series No. 77. Statistical Research, Inc., Tucson.

Whittlesey, Stephanie M., R. Ciolek-Torrello, and William L. Deaver

- 1994a Resurrecting the O'otam: The Early Formative Period in Arizona. *Mogollon VII, the Collected Papers of the 1992 Mogollon Conference Held in Las Cruces, New Mexico*, pp. 31–42. Coas Publishing & Research, Las Cruces.

Whittlesey, Stephanie M., R. Ciolek-Torrello, and Matthew A. Sterner

- 1994b Prehistory of the San Pedro River Valley. In *Southern Arizona: The Last 12,000 Years: A Cultural-Historic Overview for the Western Army National Guard Aviation Training Site*, by S. M. Whittlesey, R. S. Ciolek-Torrello, and M. A. Sterner, pp. 45–108. Technical Series 48. Statistical Research, Tucson.

Wilcox, David R.

- 1987 New Models of Social Structure at the Palo Parado Site. In *The Hohokam Village: Site Structure and Organization*, edited by David E. Doyel, pp. 253–262. Southwestern and Rocky Mountain Division, American Association for the Advancement of Science, Glenwood Springs.

Wilson, John P.

- 1999 *Peoples of the Middle Gila: A Documentary History of the Pimas and Maricopas, 1500s–1945*. Researched and written for the Gila River Indian Community, Sacaton, Arizona, 1998 (revised 1999). Report No. 77. Las Cruces.

Woodson, M. Kyle

- 1999 Migrations in Late Anasazi Prehistory: The Evidence from the Goat Hill Site. *Kiva* 65:63–84.
- 2006 The Goat Hill Site and Ancestral Pueblo Migrations into the Safford Basin. *Archaeology Southwest* 20(2):4.

**APPENDIX A**  
**CULTURAL**  
**RESOURCES**  
**IDENTIFIED**

Resource No. (ASM)	Location NAD83, Zone 12		Land Status	Cultural Affiliation and Type	Age	NRHP Recommendation
	Northing	Easting				
IO 1	3549655	591416	Private	Euroamerican, isolated feature	Historic	Ineligible
IO 2	3550178	591017	Private	Euroamerican, isolated feature	Historic	Ineligible
IO 3	3549661	359039	Private	Euroamerican, isolated feature	Historic	Ineligible
IO 4	3549705	591161	Private	Euroamerican, isolated feature	Historic/Modern?	Ineligible
IO 5	3549942	591136	Private	Euroamerican, isolated feature	Historic/Modern?	Ineligible
IO 6	3549715	591148	Private	Euroamerican, isolated feature	Historic/Modern?	Ineligible
IO 7	3549761	591203	Private	Euroamerican, isolated feature	Historic	Ineligible
IO 8	3549766	591202	Private	Euroamerican, isolated feature	Historic	Ineligible
IO 9	3549727	591192	Private	Euroamerican, isolated feature	Historic	Ineligible
IO 10	3549688	591183	Private	Euroamerican, isolated feature	Historic/Modern?	Ineligible
IO 11	3549683	591190	Private	Euroamerican, isolated feature	Historic/Modern?	Ineligible
IO 12	3549671	591189	Private	Euroamerican, isolated feature	Historic/Modern?	Ineligible
IO 13	3549678	591181	Private	Euroamerican, isolated feature	Historic/Modern?	Ineligible
IO 14	3549877	591442	Private	Euroamerican, isolated feature	Historic	Ineligible
IO 15	3550998	590961	Private	Euroamerican, isolated feature	Historic/Modern?	Ineligible
IO 16	3551200	591439	Private	Euroamerican, isolated feature	Historic/Modern?	Ineligible
IO 17	3551196	591129	Private	Euroamerican, isolated feature	Historic/Modern?	Ineligible
IO 18	3549904	591000	Private	Native American, isolated artifact	Prehistoric	Ineligible
IO 19	3549960	590997	Private	Euroamerican, isolated feature	Historic	Ineligible
IO 20	3550273	590989	Private	Euroamerican, isolated feature	Historic	Ineligible
IO 21	3550357	590991	Private	Euroamerican, isolated feature	Historic	Ineligible
IO 22	3550653	591514	Private	Euroamerican, isolated feature	Historic	Ineligible